Hema Explorer app User Guide - Android

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Overview

The *Hema Explorer* app is designed to allow you to find where you are on a map. The maps are generally designed with 4WD vehicles and touring in mind.

If you have a waypoint visible, you can use the "Go To" function to draw a routing line to get to the waypoint "as the crow flies", or opt to get driving directions in the Google Maps application externally to the *Hema Explorer* app. Note that the Google Maps app may not be installed on your device - you may need to install it from the Google Play Store.

The app does not do "turn-by-turn" navigation natively, rather it is designed so you can see exactly where you are at any given time, and how you got to where you are currently located.

About this User Guide

The user guide you are currently viewing will change periodically as new features are added or functionality changes within the app.

While we do our best to make sure that the information contained herein is accurate and useful, you may find a problem, or feel that a certain topic requires more explanation.

In this case, please submit a ticket to our Tech Support department HERE.

Portable (offline) versions of this user guide

You can download offline versions of this user guide to your device for access when you have no internet connection in the following formats:

(click the icon for the file you want to download)

ePub file for use in most common eReader devices (including iOS, which uses the iBooks app)

mobi file for use on Amazon Kindle eReader devices

PDF file for viewing almost everywhere else

Note that your device may support multiple formats.

GPS on Android devices

GPS positioning data is provided within Android devices by a function called **Location Services**. Location Services can be found under the Settings of your device.

The function of Location Services is to provide positioning data to any apps on the device which may have a use for it (including Navigation apps).

Android devices fall into two categories

1. Those that have internal GPS circuitry
2. Those that don't have any internal GPS

Generally speaking, almost all Android devices have a GPS receiver built-in, but there are some which don't. These are usually cheaper generic devices.

If you wish to use the app to its fullest on an Android device without a built-in GPS, then you must obtain an external GPS. Usually, these connect via Bluetooth.

If you have a device which does not have an internal GPS, it is up to you to source an external GPS receiver which functions correctly via Location Services.

A note about the Android interface

Android is a highly customisable operating system.

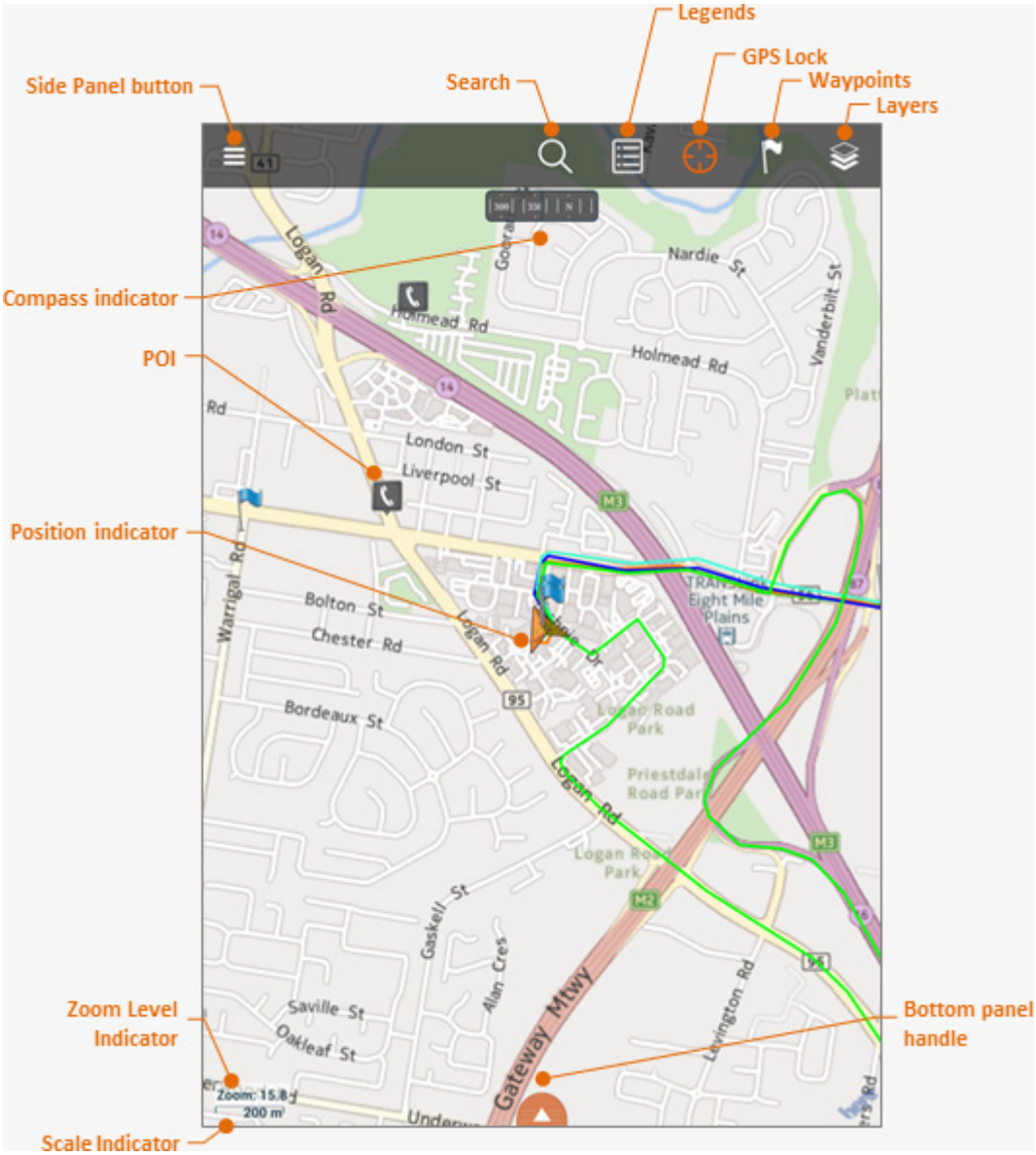
The entire appearance of the user interface can be customised and changed.

Throughout this user guide there are images depicting various panels and panes which make up the interface of the *Hema Explorer* app. Most of the images show the interface as it appears while running on a Google Nexus 7 tablet with the stock Android operating system (version 4.4 as at the time of writing).

Generally speaking, there will be no functional difference within the *Hema Explorer* app, regardless of which version of Android it is running under.

Some images within the user guide have been modified or have been enhanced or magnified for the sake of clarity.

Getting to know the screen layout



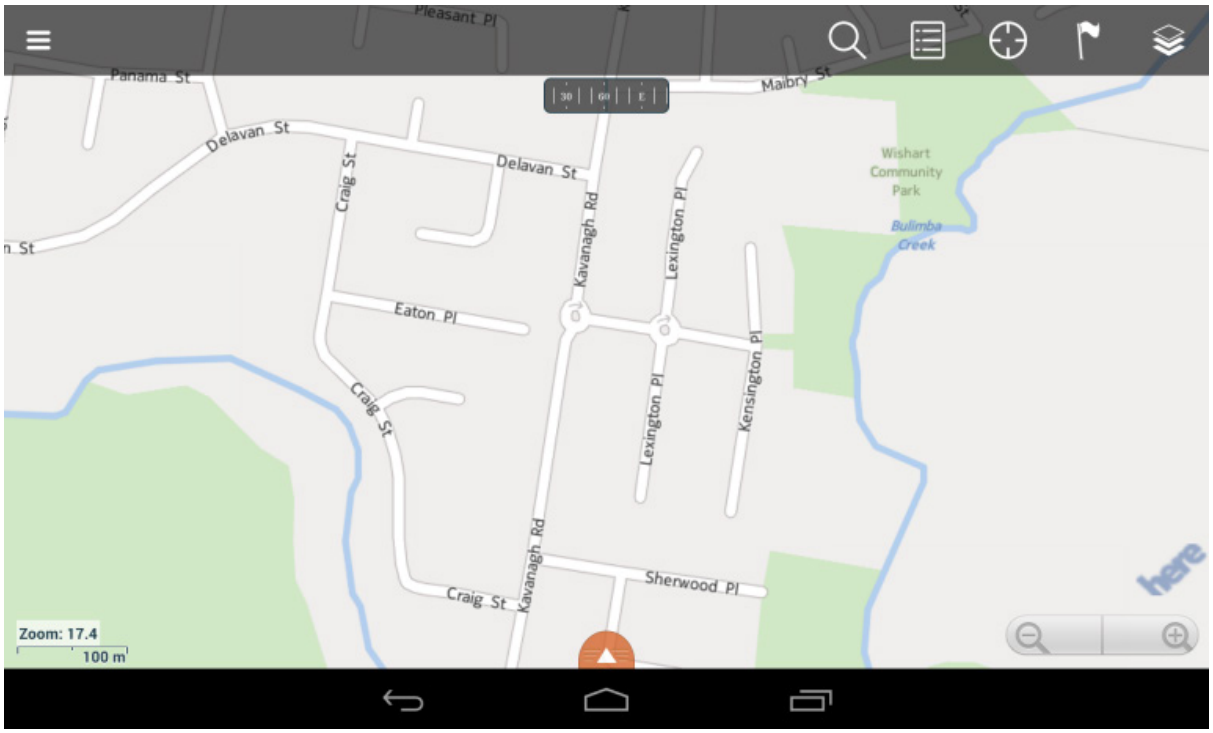
The screen of the *Hema Explorer* app is shown above. The image shows the basic layout of the app.

The layout consists of a map panel (covering the majority of the screen), with slide out panels at the left and bottom of the screen.

There are a number of buttons location along the app titlebar along the top of the screen.

Access to some functions are via these buttons, while others are accessible from the slide out panels.

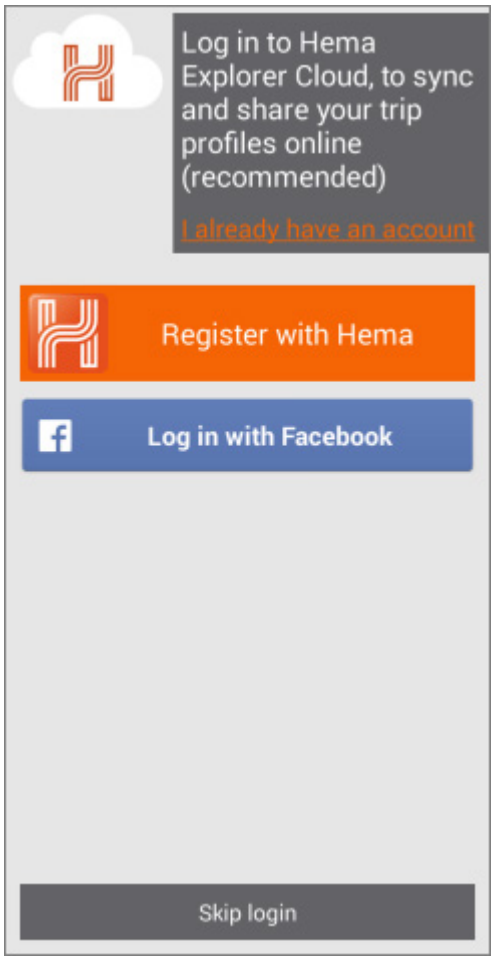
Rotating the device will switch the app to landscape mode. All buttons etc. are still in the same place. An example of landscape mode is shown below (note that the Android status bar has been removed in this example).



Initial Startup Process

Once started, the app will guide you through the *initial startup process*. If you are starting the app after installing it on your device for the first time, you should accept the recommendations shown here.

When you first start the app you will see the startup panel, shown below:


Log in to Hema Explorer Cloud, to sync and share your trip profiles online (recommended)
I already have an account
Register with Hema
Log in with Facebook
Skip login

You are prompted to do one of the following:

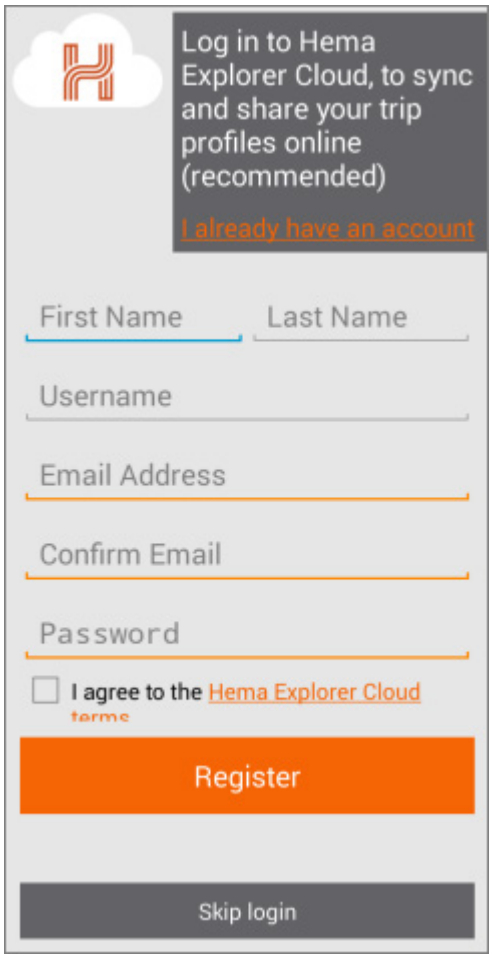
- Login to your existing Hema Explorer Cloud account via the **I already have an account link**
- Create an account via the **Register with Hema button**
- Log in using your Facebook account via the **Log in with Facebook button**

You can choose to skip login at this point, but we do not recommend doing this.

Logging into the app allows you to use the additional features provided by the Cloud, such as auto-sync of your track logs and waypoints.

Creating a Cloud account

From the initial screen, tap the **Register with Hema button**. The account registration screen will open.



Enter your details where shown on the panel, tick the **I agree to the Hema Explorer Cloud terms** box, and then click the Register button.

Your Cloud account will then be created.

NOTE
You can, of course, create your account directly using the Hema Explorer Cloud. Just go to the following URL and create your account.

http://cloud.hemaexplorer.com.au

Downloading Initial Content

Warning!
Do not attempt large downloads unless connected to a decent internet connection.
If you are downloading maps or sections of maps, there could be a large amount of data which needs to be downloaded.
It is not wise to attempt large downloads while on mobile broadband plans, unless you are certain that you have a large download limit, or that you are not risking reaching your limit. Your ISP may charge for excess data consumed on your plan, and these charges can sometimes be excessive.
It is up to you to monitor and manage your data on a mobile data plan.
Any large data downloads should be done while connected to a fast stable internet connection, for example, ADSL via WiFi at home.

After you have logged in, it is recommended that you allow the app to download the standard content.

The standard content includes the *Hema Maps Layers*, and the *Hema POIs*.

The POI content will be downloaded automatically. ie. you cannot skip the download of the POI content.

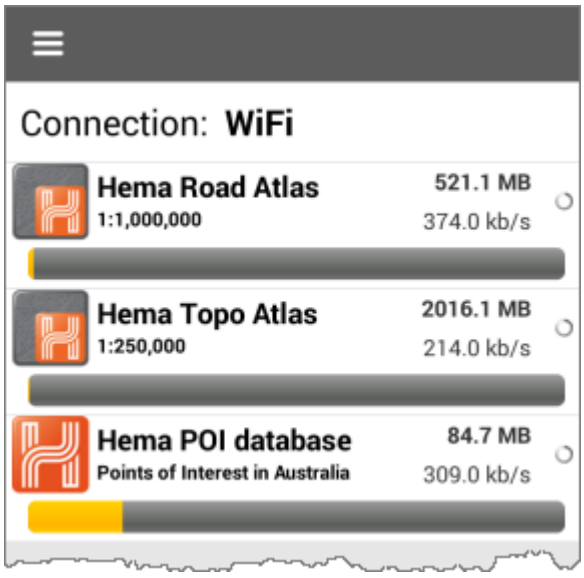
The app will prompt you to start the download process.

Skipping download of base content
You can choose to skip the download of the base content, but we recommend that you do not skip this download.
If you do skip the content download, you will need to manually download it later. See this section of the user guide for information on manually downloading the content.

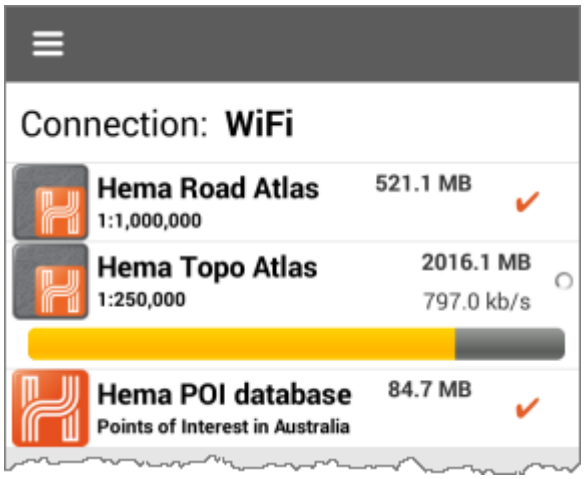
While downloading of content is in progress, you can check the status by going to the Downloads panel.

Tap the Downloads button on the pull-out side panel to view the **Downloads panel**.

Tapping the button will open the Downloads panel, showing details of any downloads. As you can see in the example below, the panel shows the status while downloading over an existing WiFi internet connection.



Once items in the download list have completed downloading, they are displayed with a tick adjacent to them, as shown below.

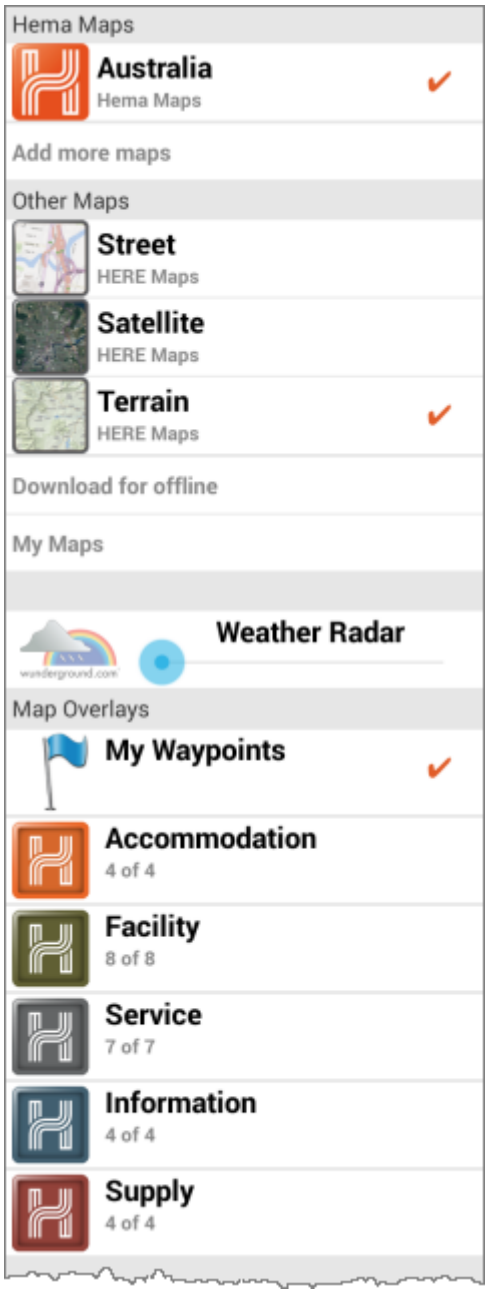


Manually downloading base content

Warning!
Do not attempt large downloads unless connected to a decent internet connection.
If you are downloading maps or sections of maps, there could be a large amount of data which needs to be downloaded.
It is not wise to attempt large downloads while on mobile broadband plans, unless you are certain that you have a large download limit, or that you are not risking reaching your limit. Your ISP may charge for excess data consumed on your plan, and these charges can sometimes be excessive.
It is up to you to monitor and manage your data on a mobile data plan.
Any large data downloads should be done while connected to a fast stable internet connection, for example, ADSL via WiFi at home.

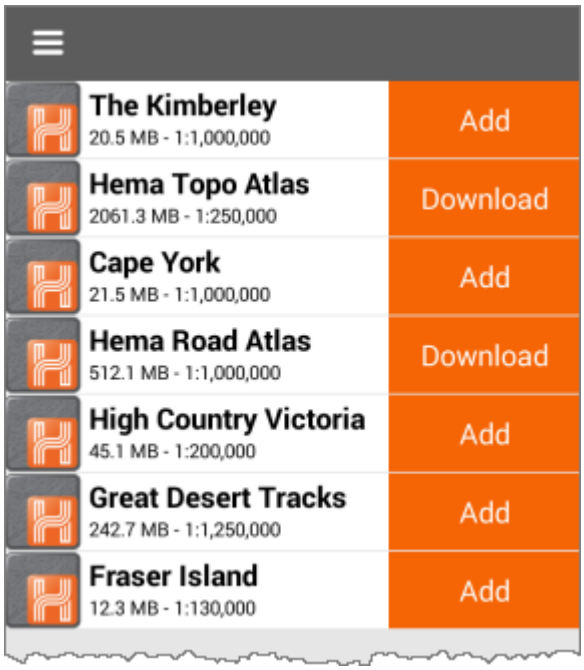
If you have chosen to skip the downloading of the base content when you first stated the app, you will have to download it at some stage in order to use it. As you chose to skip over the automatic download of the base content, you will have to do it manually.

Open the **Layers panel** by tapping the **Layers button** at top-right.



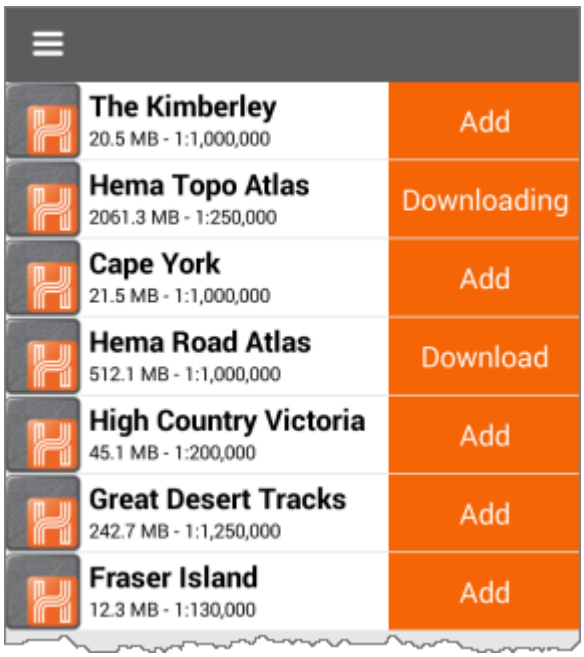
On the Layers panel, tap the **Add more maps button**

You will see the **Add more maps panel**, as shown below



As you can see from the example shown above, the maps which form the base content (Hema Topo Atlas and Hema Road Atlas) both have a download button adjacent to them.

Tapping the **Download button** next to an item will add that item to the download queue.



Once the selected item has been queued, you will see the button has changed to **Downloading**. Tapping the Downloading button will take you to the Downloads panel showing the status of the downloads.

Useful Info

Here is some information which you may find useful while using the app.

Please note that all user guides etc. are constantly being updated. New versions are released as soon as they become available.

Hema Explorer Cloud

The Hema Explorer Cloud is a useful extension of the app.

You can find the cloud at the following URL:

http://cloud.hemaexplorer.com.au/

When you first run the app on your device, you were prompted to create a user account. If you have a user account, you can log in to the cloud with that account. If you did not create an account, you can create one from within the app, or directly on the Cloud site itself.

App Support

Hema Maps maintains a Tech Support website in an effort to answer questions and provide support for the use of our products.

The Tech Support website consists of the following:

Tech Support Knowledegbase

A Knowledgebase which consists of how-to articles and answers to some common questions. The Knowledgebase divides the articles into categories and provides a search facility to make finding the information you are looking for easier.

You can find the Tech Support Knowledgebase at the following URL:

http://hema.helpserve.com/Knowledgebase/List

Tech Support Ticket System

The Tech Support Ticket System allows you to submit a query related to any of the Hema products.

The Tech Support Ticket System will automatically assign a case number to your query.

The Tech Support team will then do their best to assist you with the issue you are having via email response.

You can find the Tech Support Ticket System at the following URL:

http://hema.helpserve.com/Tickets/Submit

Tips for using the Tech Support Ticket System

- Please search the Knowledgebase before you submit a ticket. The answer to your query is often already answered within the Knowledgebase.
- If you do need to submit a ticket, please provide as much pertinent information related to the issue you are having as possible. It makes it hard to assist if your ticket query is along the lines of "The app doesn't work".

Maps

Overview

This chapter of the User Guide is designed to introduce you to some of the concepts related to the use of maps within the *Hema Explorer* app.

You do not need to become a map expert, but it helps to have some understanding to make your use of the app more enjoyable.

With typical mapping apps (such as Google Maps, etc.), a problem becomes apparent once you leave an area where you have internet connectivity. The issue is that without an internet connection, you can no longer "stream" new map information to your device, thus, you will have no mapping for those locations. The *Hema Explorer* app is designed so that you have a set of maps on-board, regardless of whether you have an active internet connection while using the app.

Warning!
Do not attempt large downloads unless connected to a decent internet connection.
If you are downloading maps or sections of maps, there could be a large amount of data which needs to be downloaded.
It is not wise to attempt large downloads while on mobile broadband plans, unless you are certain that you have a large download limit, or that you are not risking reaching your limit. Your ISP may charge for excess data consumed on your plan, and these charges can sometimes be excessive.
It is up to you to monitor and manage your data on a mobile data plan.
Any large data downloads should be done while connected to a fast stable internet connection, for example, ADSL via WiFi at home.

Map Layers

Maps are accessible from the **Layers panel** within the app. Each map is a separate layer. A good analogy of layers is if you imagine a stack of paper maps sitting on a coffee table. Each map sheet could be thought of as a "layer". Only one map (or layer) is visible at any one time. This is the one which is sitting on the top of the pile. This is your "current map".

In the *Hema Explorer* app, layers come in a few forms:

1. *Hema Maps Layers*
2. *In-app Purchased Maps*
3. Additional layers provided by HERE Maps

Generally speaking, an *In-app Purchased Map* will offer more detail than the corresponding area of the current *Hema Maps Layer*.

For example if you were on Fraser Island in Queensland, you may be viewing the *Hema Maps Layer* of that area, but if you wished for a more detailed view, you might switch to the *In-app Purchased Map* for Fraser Island.

Of course, not all areas will be covered by a specific *In-app Purchased Map*. *In-app Purchased Map* availability is determined by many factors.

As well as map layers provided by Hema, the app gives you access to a number of other layers, such as:

- Street (provided by HERE Maps)
- Terrain (provided by HERE Maps)
- Satellite (provided by HERE Maps)

These additional layers provide another view of the area you are currently traversing.

> Warning!
> The layers provided by 3rd parties cannot be downloaded in their entirety for offline use. They are available only where your device has an internet connection.
>
> You CAN, however, download areas of these layers and save them for later use. For example, you may be going to a specific area of Cape York, and wish to download the satellite imagery of the area you will be visiting. You can do this using the Download for offline function on the Layers pane.

The examples below show the appearance of different layers within the same region. As you can see the different layers may have totally different appearances.

Hema Layer

Satellite layer

Street layer

Terrain layer

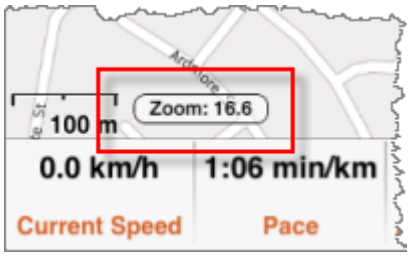
Zoom Levels

Each map (or map layer) may consist of a number of zoom levels. As you zoom into (or enlarge) the map which is currently displayed, the zoom level will change.

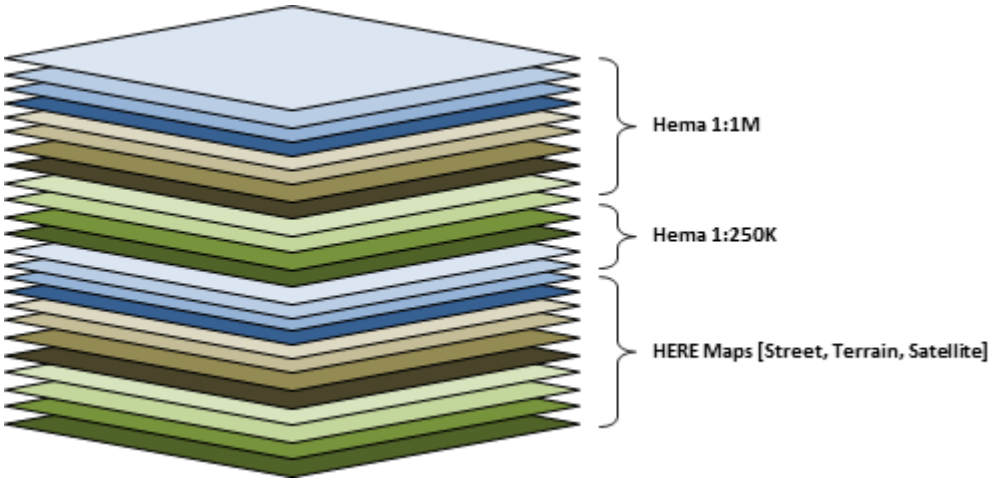
Each layer has a specific range of zoom levels which it covers. Once you have reached the maximum zoom level of the current layer, it is not possible to zoom in any further. If an *In-app Purchased Map* exists for that area, and you have it downloaded on your device, you can change layers to view the *In-app Purchased Map*.

It is possible to display the current zoom level on screen as a small indicator called the **Zoom Label** adjacent to the Map Scale Indicator by switching on the option in the Settings Panel. Remember, you can double-tap the map to zoom in one whole zoom level at a time.

The image below shows an example of the Zoom-Level indicator, when switched on.



The diagram below gives you an idea of the different map layers in the *Hema Explorer* app.



Zoom Levels on Android version of Hema Explorer

Hema 1:1M **4.8 - 11.8**

Hema 1:250K **11.9 - 13.8**

HERE Maps [Street, Terrain, Satellite] **13.9 - MAX**

Zoom level to scale mapping

Zoom Level	Approximate Scale
0	1 : 591,657,551
1	1 : 295,828,775
2	1 : 147,914,388
3	1 : 73,957,193
4	1 : 36,978,597
5	1 : 18,489,298
6	1 : 9,244,649
7	1 : 4,622,325
8	1 : 2,311,162
9	1 : 1,155,581
10	1 : 577,791

11	1 : 288,885
12	1 : 144,448
13	1 : 72,224
14	1 : 36,112
15	1 : 18,056
16	1 : 9,028
17	1 : 4,514
18	1 : 2,257
19	1 : 1,128

Tiles

Each map layer zoom-level consists of a large number of "tiles". A map tile is a small square of map. When tiles are "stitched together" by the app, they form an area of map visible to you as a seamless whole.

So, for each map layer, there could be a number of zoom-levels, and each zoom-level consists of a (large) number of tiles.

Zooming into maps

You can zoom into maps (ie. increase the level of detail) using two methods:

- The usual "pinch open / closed" mechanism which is used on tablets and smartphones.
- Double-tap the screen

Pinch Closed
Zoom Out

Pinch Open
Zoom In

Double Tap
Zoom in One Zoom Level at a time

Downloading Maps

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It is up to you to monitor and manage your data on a mobile data plan.
Any large data downloads should be done while connected to a fast stable internet connection, for example, ADSL via WiFi at home.

Introduction

When you install the app on your device, the app does not contain any maps. As part of the app startup process, you are prompted to download the *Hema Maps Layer*.

You need to download the *Hema Maps Layer* so that it is available for offline use (ie. where you do not have internet connectivity)

Note!
Be aware that downloading the *Hema Maps Layer* can take some time, as the data is large (~2.5Gb). You also need to ensure that your device has enough free space on it to store the downloaded data.

Apart from *Hema Maps Layers*, you can purchase and download one or more *In-app Purchased Maps*. An *In-app Purchased Map* is a map which will be focused on a specific area of interest.

Currently, Android in-app purchases are available at no cost as an introductory offer.

Downloading Map Sections

Remember, some map layers are downloaded in their entirety for offline use.

- *Hema Maps Layers* are completely downloaded (normally when the app is first run on your device. If you purchase any additional Hema maps, these are also downloaded in their entirety to your device.
- HERE Maps are not able to be downloaded completely, but you have options to download sections of these maps for offline use:

1. You can select a specified area of one of the HERE Maps layers, choose a zoom level, and download the tiles for later offline use.
2. You can create a route, or view a track, and have the app download the map tiles required to cover the path of the selected route or track.

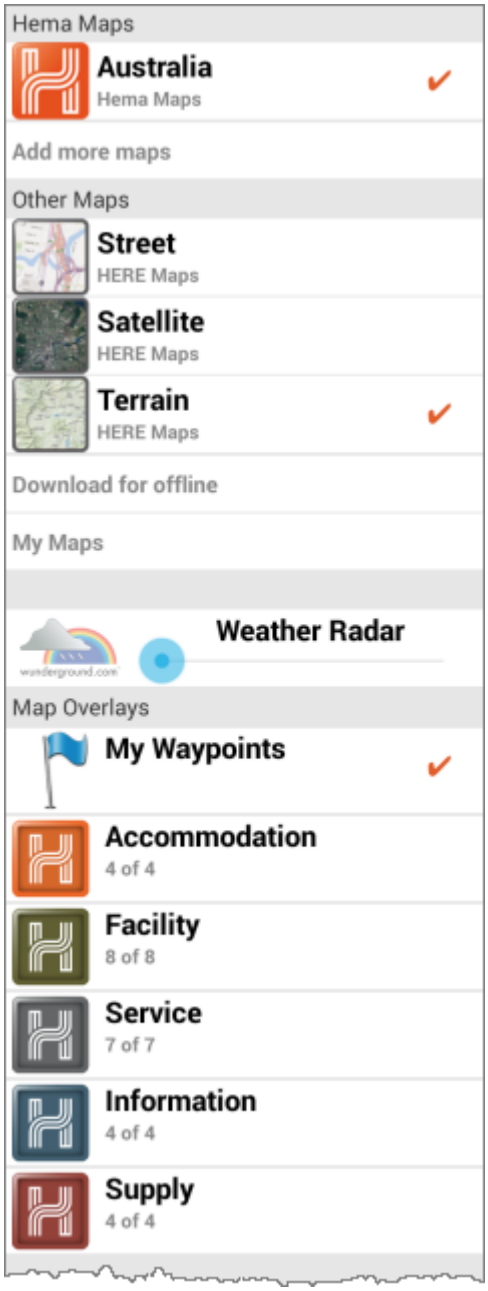
Each of these options is discussed in more detail below.

The first step in downloading HERE Maps for offline use is to select which layer out of the Street, Terrain and Satellite layers you wish to download.

Selecting which HERE Maps layer to download

You must first decide which of the HERE Maps layers you would like to download. Simply activate the layer you require from the Layers panel.

Tap the **Layers button** to open the Layers panel.



Select the HERE Maps layer you want by tapping it. The currently active HERE Maps layer is shown via a tick next to it in the Layers panel.

Whichever HERE Maps layer is selected will be the one that gets downloaded by the methods shown below.

Managing Maps

Downloading HERE Maps by area selection

> **Tips!**
>
> **If you intend to download a map area for offline use, it is easier to center and zoom the area you are interested in *before* you select the area using the download for offline function.**
>
> **Whichever HERE Maps layer is selected when you tap the "Download for offline" button will be the layer which you save. ie. if you are viewing the "Terrain" HERE Maps layer, then that will be the layer which is saved.**

While on the Layers panel, tap the **Download for offline button**. The map area selection screen will appear, which allows you to select an area for downloading.

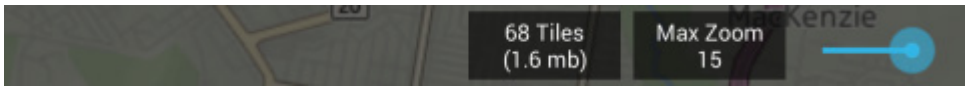
On the map area selection screen, tap-and-drag to select an area of the currently selected HERE Maps layer. As you drag, a translucent box will be drawn over the map to show the selected area.

You cannot drag the area selection box after creation. You must draw a new box if the existing one does not suit. You can, however, resize the box using the circular drag handles at each corner of the drag box.

The label at the center of the control bar shows how many tiles and the amount of data which will be downloaded.

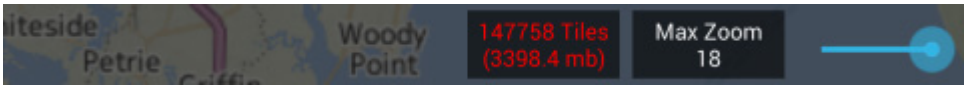
The label to the left of the slider control shows the current zoom level.

Once you are satisfied with the area, you can adjust the required zoom level using the slider at the right of the control bar at the top of the screen.



⚠ Remember, there is a 2Gb data limit on each download.

If you increase the zoom level too much for a given area, the tile label will turn red. This indicates you are trying to download more data than you are permitted to, and you will not be able to continue with this download. In this case, adjust the Max Zoom value by moving the slider to the left.



Once you are happy with the area that wish to download, tap the **Save** button at bottom-right. If you change your mind, tap the **Cancel** button.

When you tap the Save button, you will be prompted to give your map a name.

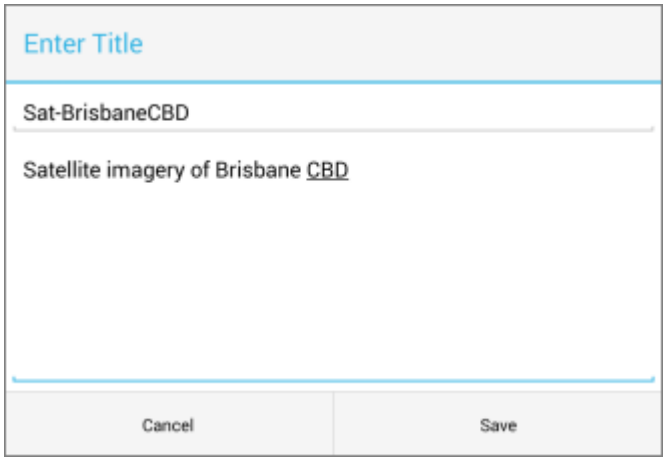
The app gives your map area save a default name of the following form:

Map - DD/MM/YYYY HH:MM:SS am/pm

It is recommended that you give your saved map data a useful name rather than leaving the default name. It might be fine to leave the default name if you only have a couple of map saves, but if you have any more than a couple, it will become unwieldy trying to find which map is which.

As you see in the example below, giving your map area a sensible name will mean that it is obvious what the map contains. You can use whatever map section name suits you.

You can also optionally add notes related to the saved map for future reference.

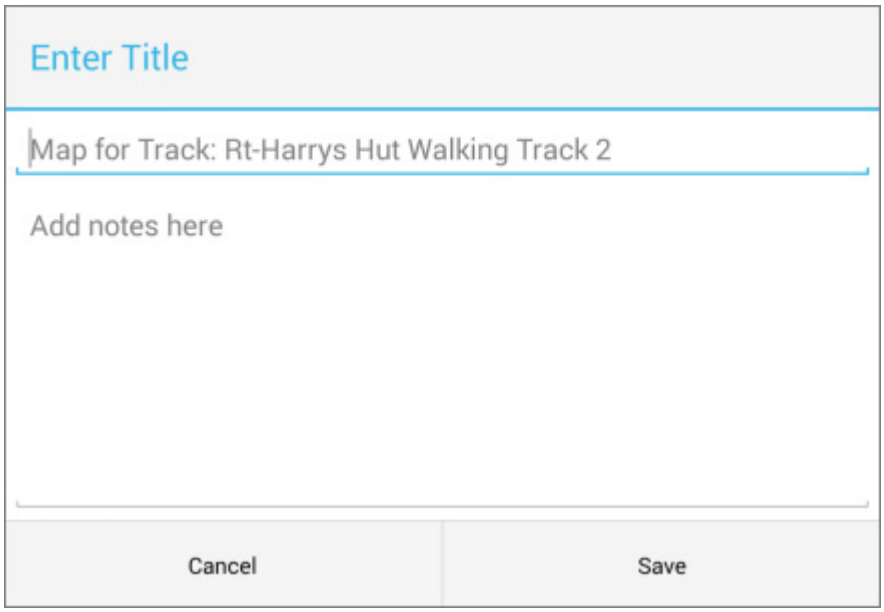


Once you are satisfied with your name tap the **Save button** to start the download process.

Downloading maps along a track

If you have a track or route on your device, the app can download map tiles along that path for you.

From the track or route details panel, tap the Download Map Along Track button. You will be prompted to give the download map tileset a name. The name will default to "Map for Track: <Your Track Name>".



You can leave the default name or give it a new name, and or add notes if you require.

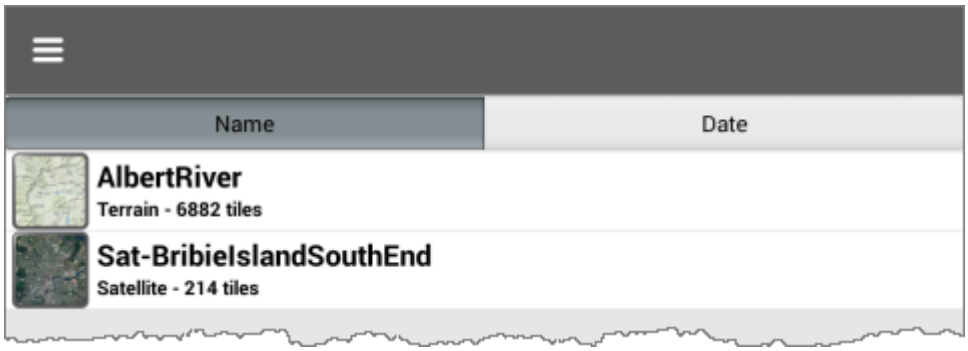
Once done, tap the **Save button** to begin download of the tileset. Once the Save button is tapped, the map tiles download will be queued up in the Downloads panel, where you can check its status.

Tap the **Cancel button** to cancel the operation.

Removing Downloaded Map Sections

Whenever you download additional map sections for offline use, they will consume space on your device. Periodically you may want to clean up old map sections which you are no longer using. ie. you may do a big trip to Cape York, but after returning, you may decide to remove the unneeded content until your next trip.

To view the maps which you have previously saved, open the Layers panel by tapping the **Layers button**. Then, tap the **My Maps button** on the Layers panel. This will display the **My Maps list**, showing any previously downloaded map sections.



Removing multiple map sections

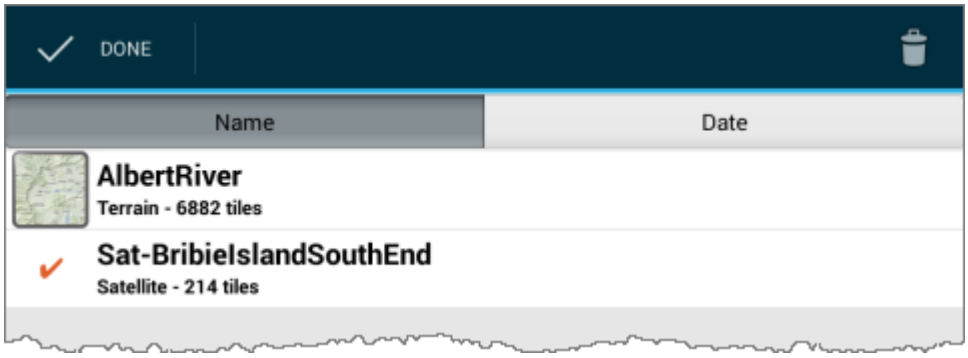
You can delete multiple sections in one action from the My Maps list.

Simply tap-and-hold on one of the maps you wish to delete. The selected map will be ticked.

You can then tap on any of the other map sections you wish to delete.

Once you have selected the required map section for deletion, tap the **Rubbish Bin button** at upper-right.

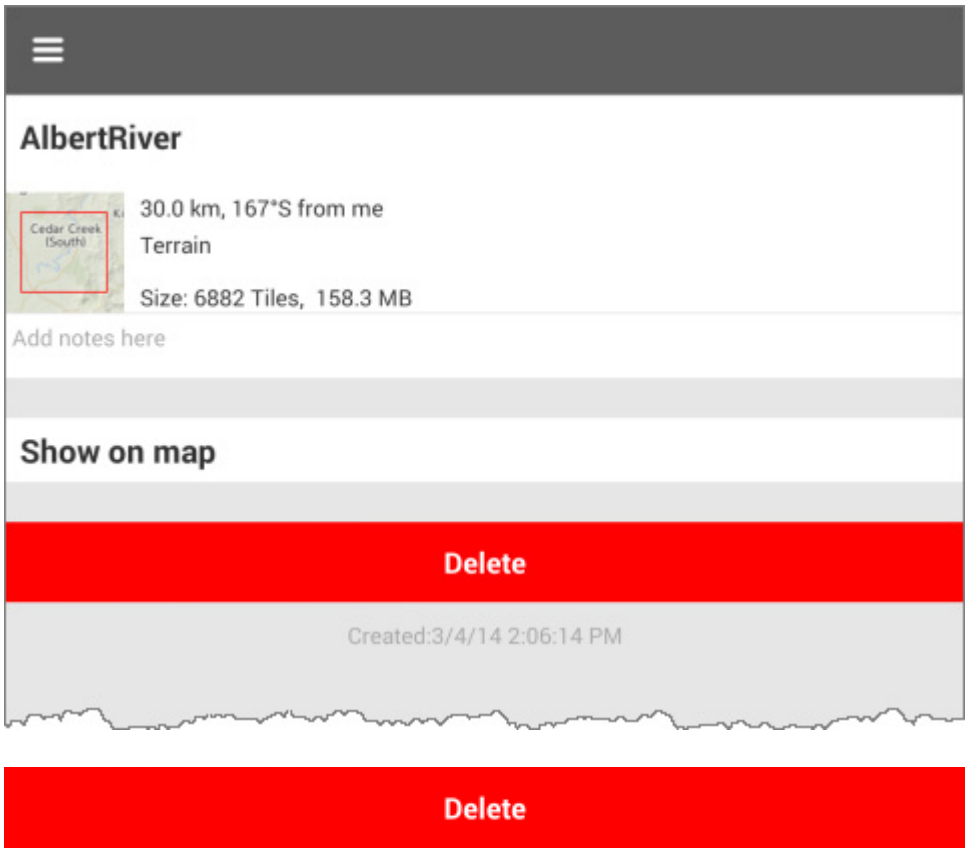
If you change your mind, tap the **Done button** without making any changes.



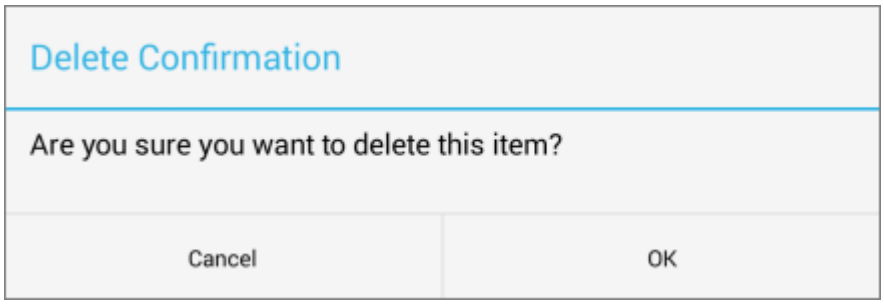
Removing a single map section

Tap the map section in the list which you wish to delete. This will open the **Map Details pane**. The Map Details pane shows some more information related to the downloaded map section.

You can also display the map section, delete the map section from this panel.



Tap the **Delete button** to remove the selected map section. You will be prompted to confirm your action.



Tapping **OK** will continue with the deletion of the content. Tapping **Cancel** will exit the process.

Note!
There will be a short delay while the content is deleted from your device's storage. The delay will be proportional to the size of the content being deleted.

Adding Additional Maps

Note!

Currently additional maps are available within the Android version of Hema Explorer at no additional cost.

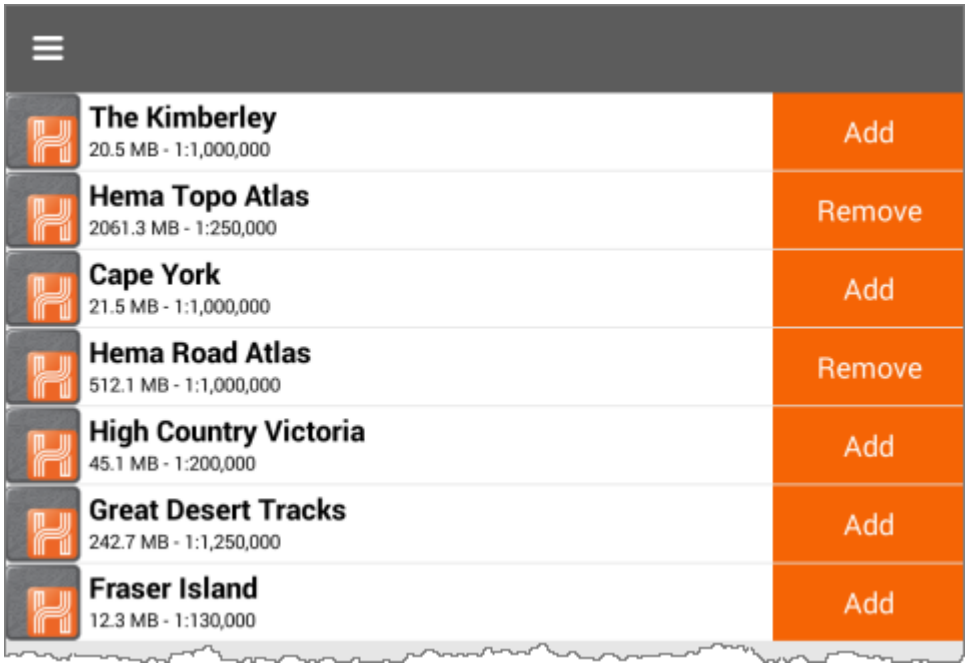
At some point, this may change, and the currently free content will become available via in-app purchase.

Open the **Layers panel** by tapping the Layers button.

Tap the **Add more maps button**. The in-app purchase panel will appear.

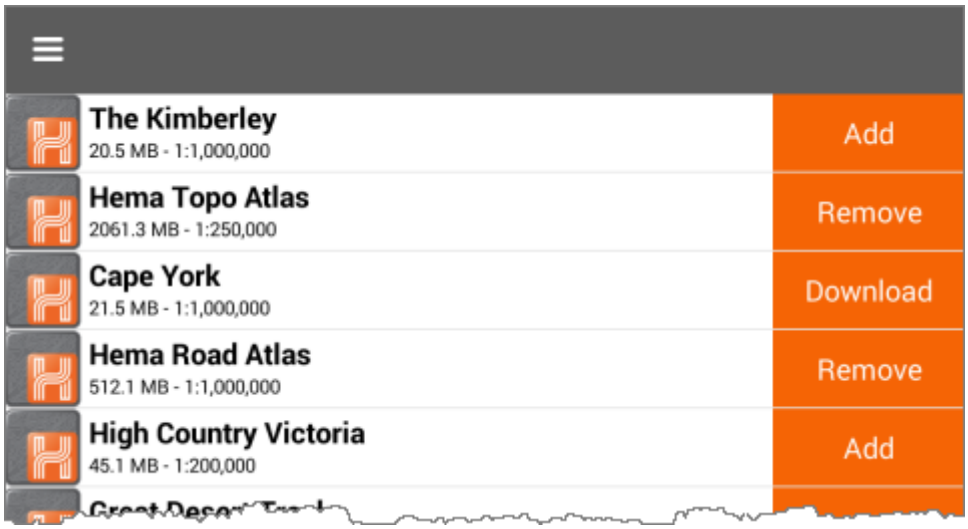
Any maps which are already installed will display with a

button next to them.



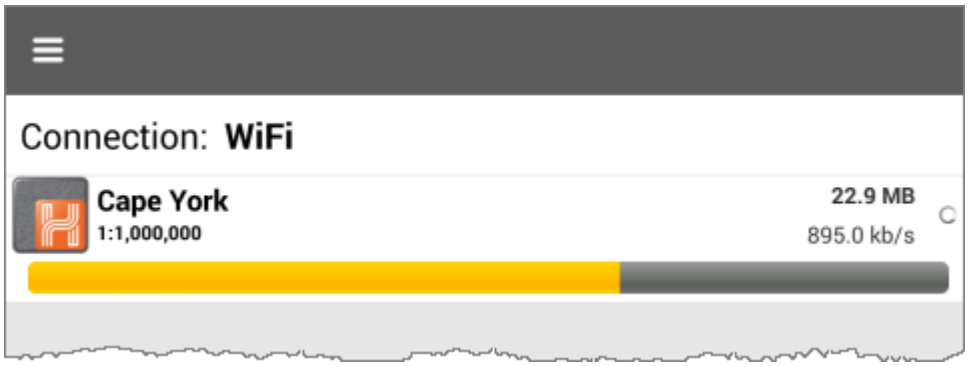
Tap the **Add button** next to the map you wish to purchase.

The status of the selected map will change to show the **Download button**.



Tap the **Download button** next to the required map to start the download process. Multiple selections will be queued up for download.

The button next to the selected map will change status again to show **Downloading**. You can tap the Downloading button to jump to the download status panel. The download status panel will show the progress of any active downloads. In the example below, the only active download is the Cape York map.



Once the download is complete, the download status screen will show a tick next to completed downloads, as shown below:

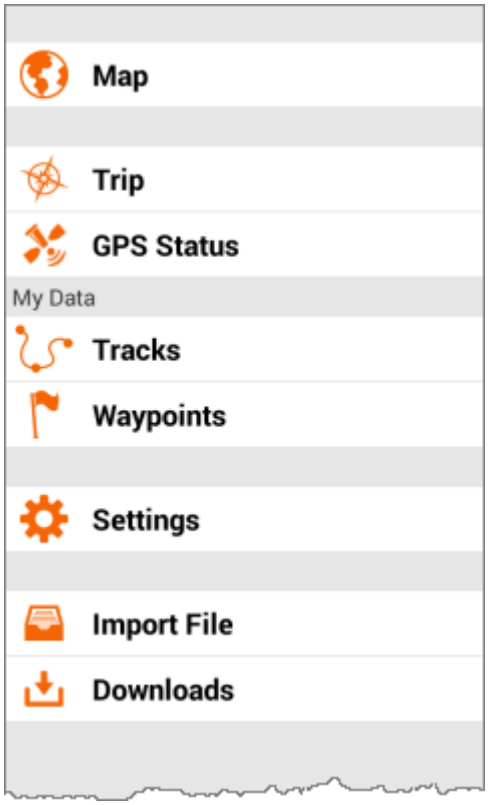
If you wish, you can close the Download Status panel while downloads are active, and return to it at any time from the pull-out side panel, by tapping the **Downloads button**.

Side panel

Side Panel

Pull out the Side Panel by tapping the **Side Panel button** at top-left of the main app screen.

The side panel contains a number of sub-panels, as shown in the image below.

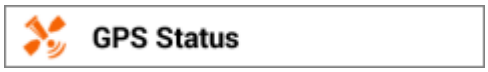


Each of the functions provided by the sub-panels is discussed in separate chapters, where appropriate, in this user guide.

The **Map button** on the side panel returns you to the app's main map view.

The **Trip button** on the side panel opens the **Trip panel**, showing details of the currently active trip/track.

Further details are contained in the Trip panel section of this user guide.



The **GPS Status button** opens the **GPS Status panel**, showing information related to the status of the in-built GPS receiver.

Further details are in the GPS Status section of this user guide.

My Data section

The side panel sections under My Data relate specifically to the data which you have saved or synced on your device.

The **Tracks button** opens the **Tracks panel**, showing all Tracks and Routes which you have on your device.

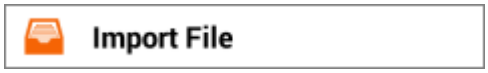
Further details are in the Tracks panel section of this user guide.

The **Waypoints button** opens the **Waypoints panel**, showing all Waypoints which you have on your device.

Further details are in the Waypoints panel section of this user guide.

The **Settings button** opens the **Settings panel**, where you can change the configuration of the app on your device.

Further details are in the Settings panel section of this user guide.



The **Import File button** opens a **browser panel**, which you can use to import external files (waypoints, tracks, routes, etc.) stored on your device.

Further details are in the Import File section of this user guide.

The **Downloads button** opens a **Downloads panel**, which you can use to view and manage in-progress downloads on your device.

Further details are in the Downloads panel section of this user guide.

Trip panel

Introduction

Throughout this user guide, and other documentation associated with the *Hema Explorer* app, the terms ***Trip Log*** and ***Track Log*** can be used interchangeably. Regardless of what you prefer to refer to it as, the Trip (or Track) Log has one purpose, to store information related to your current trip.

When you are travelling, if you have enabled recording, *Hema Explorer* will record your Tracks and optionally sync them to your Hema Explorer Cloud account. Tracks are a record of the path which you have followed, and contain statistics related to the trip.

NOTE
This feature is only available on devices equipped with an internal GPS, or connected to an external GPS via Bluetooth etc.
Generally, Apple iPhones, and iPads with cellular capabilities have in-built GPS. Most Android devices have in-built GPS.
The function and accuracy of the in-built GPS is controlled by the device manufacturer.

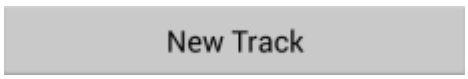
They can be a handy way to find your way back out of thick scrub, or perhaps when you entered an area by day, and need to find your way back out again after darkness has fallen.

You can turn track logging on or off at any time.

Track logging functions are performed on the **Trip panel**.

Tap the **Side panel button** at the top-left of the screen.

On the side panel, tap the **Trip button** to open the **Trip panel.**



To start a new trip (or track) log, tap the **New Track button**.

Tips on naming your data

It is recommended to give your data (Routes, AND Tracks & Waypoints) a sensible name for future reference, and to aid in identifying routes on your Cloud account, etc. here's some suggestions:

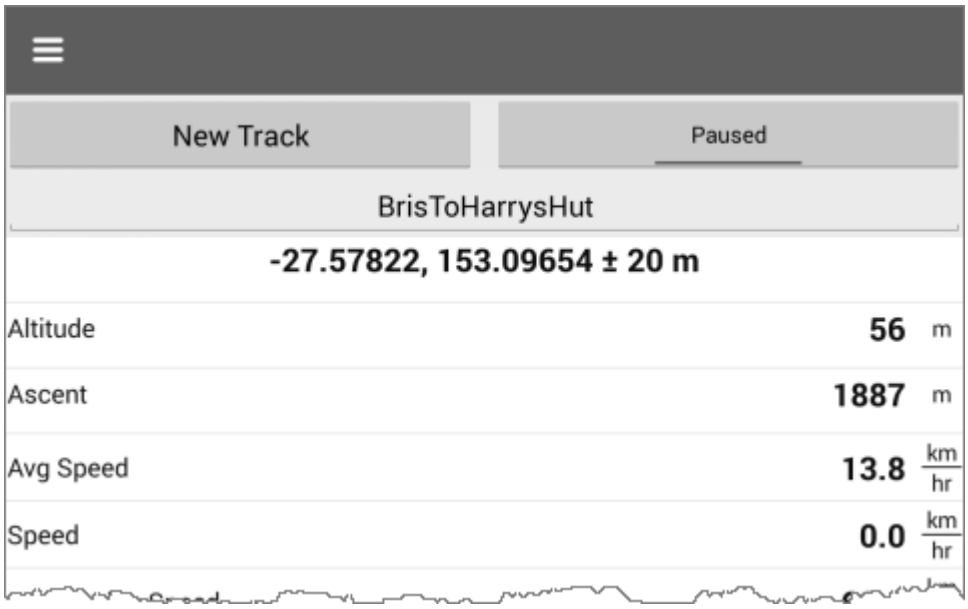
- **Routes & Tracks**

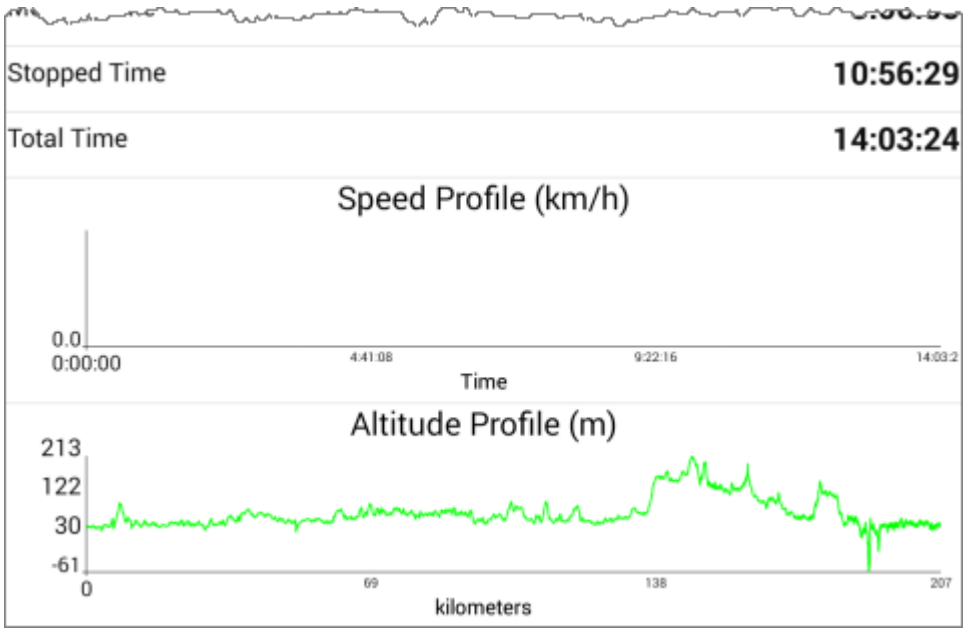
    - rt-Brisbane-to-Roma ("rt" - identifies it clearly as a route)
    - tr-CapeYorkTrip-2013 ("tr" - identifies it clearly as a track)
    - tr-WA-Odyssey
- **Waypoints**
    - Micks_Secret_Barra_Spot
    - Perfect-Campground
    - Nice_Sunset
    - RareBirdColony

You get the idea! It will be easier to use your data later if you give it a good recognisable name right from the get-go.

The trip log can be paused and resumed at any time. When the trip log is paused (ie. not recording), and the **Paused button** is displayed, simply tap it to resume recording. The button will change state to show that it is currently recording, as shown above.

The trip panel shows a variety of parameters related to the current trip, along with Speed and Altitude Profile graphs at the bottom.



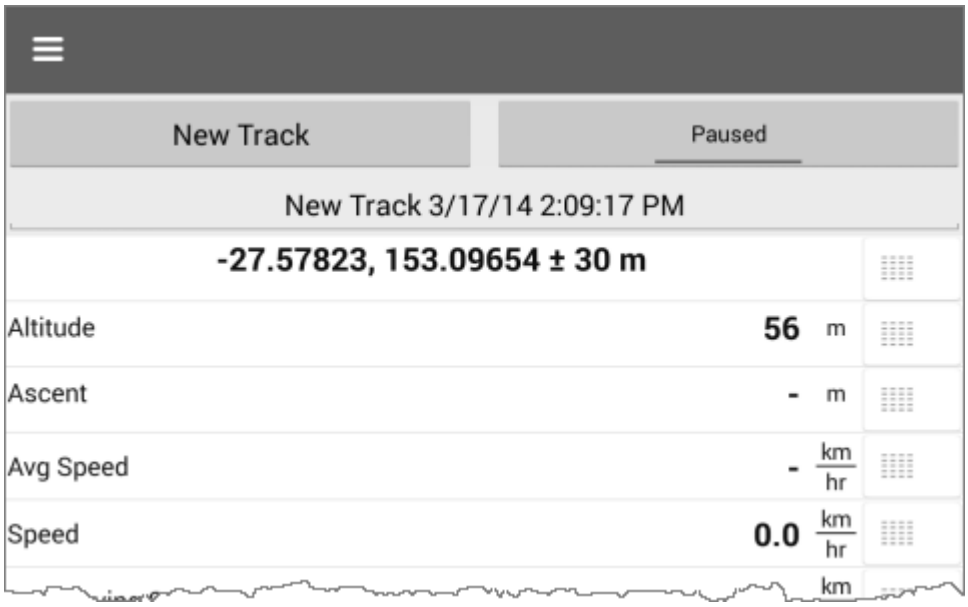


Editing the Trip panel layout

When the app is installed, the parameters shown on the trip panel are listed in their default order. The display order can be modified to suit your personal taste.

If you wish to change the order of the fields on the Trip panel, tap-and-hold on one of the data fields.

This will activate edit mode. While in edit mode, drag handles appear to the right of each data field, as shown below:



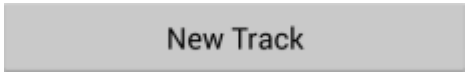
To move a field up or down in the list, tap the drag-handle on the required data field.

While holding the drag-handle, drag it up or down the pane. Lift your finger to drop it in the required position.

Once you have rearranged the fields to suit, tap-and-hold on one of the data fields to exit edit mode. The drag handles will switch off, and your new layout will become permanent.

Remember that you can change the display order at any time by following the process above.

Creating and Recording Tracks



On the Trip panel, tap the **New Track button**. This signals that you wish to start a new track. The previously open track will be closed.

A new (empty) track will be created. The app will assign a default name for the track.

However, you can tap the name field at the top of the track details pane, and enter any name you like. Obviously, it is better to give the track a name which will be easily recognised later.

ie. **2014-Cape-York-Week1** is more meaningful than say **New Track (3/18/14 7:49:38 AM)**.

When a new track is created, it is always in **Paused mode**.

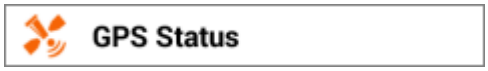
After creating a new track, if you want the track to be recorded, you must un-pause the track by tapping the Paused button.

Switch track recording on by tapping the **Paused button**. The button will change its status indicating that the current track is now recording.

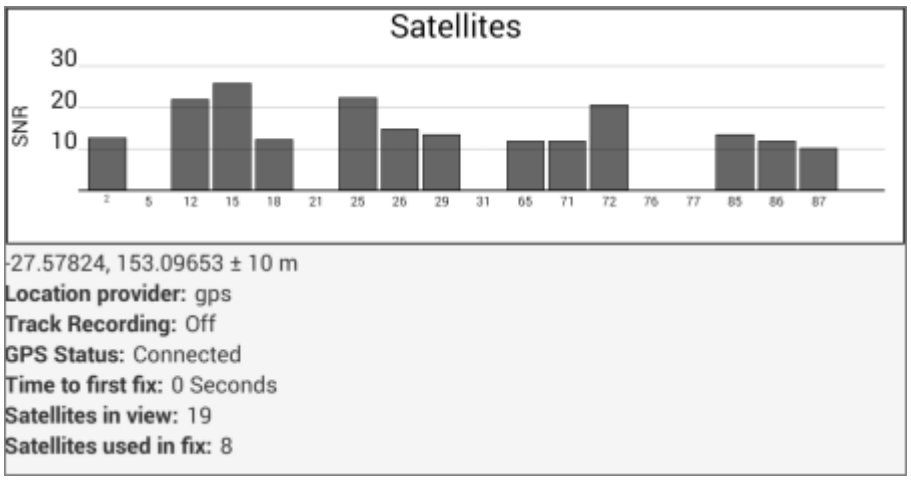
Once you are done recording, or if you want to suspend recording, switch back to pause mode by tapping the Recording button again.

All tracks, whether active (either recording or paused), or finished, are accessible within the Tracks section of the My Data panel .

GPS Status panel



Tapping the **GPS Status button** on the side pull-out panel displays the GPS Status panel.

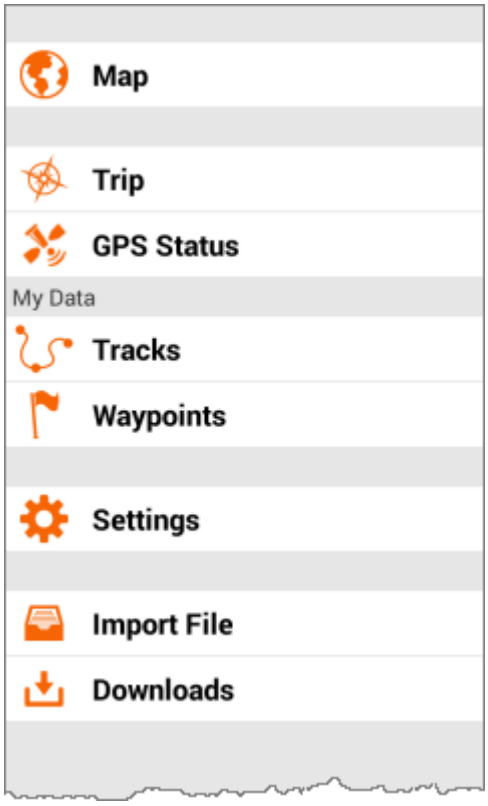


This shows the current latitude and longitude, and approximate accuracy available with the available GPS signal quality, and the relative signal strengths of different satellites.

Tracks panel

Any saved data such as tracks, waypoints and routes can be accessed from the My Data section of the pull-out side panel.

To access saved Track or Route data, tap the **Side panel button** at the top-left of the screen.



Under the **My Data section** of the side panel, there are two sub-sections:

- Tracks
- Waypoints

Note
The Tracks section contains both Tracks and Routes.

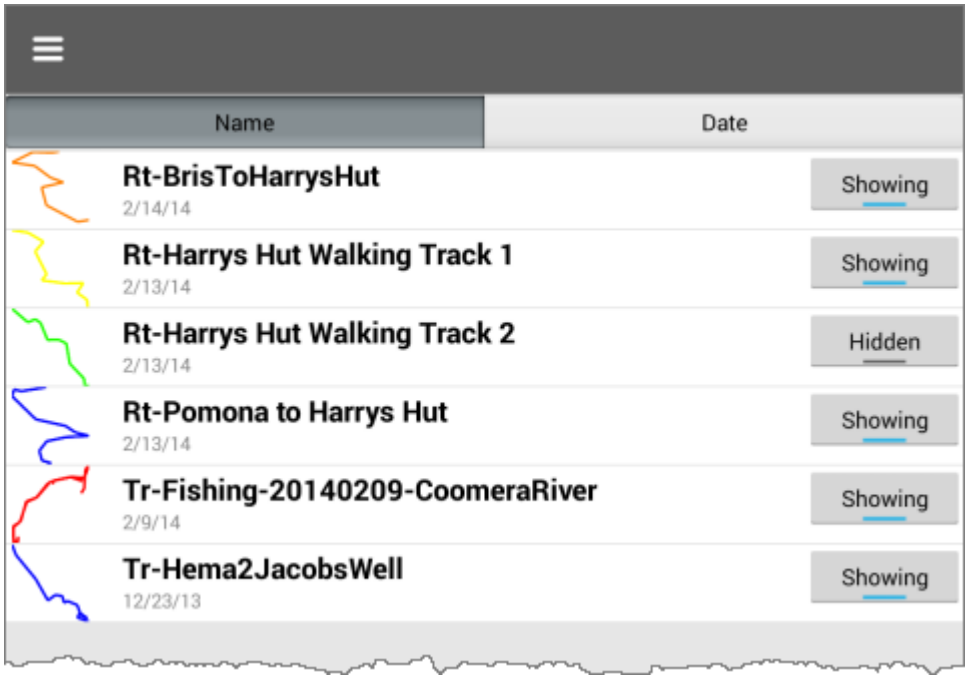
Tracks can be edited by trimming the start and end of the track to remove unwanted data.

Routes can be edited by moving and / or deleting specific points which make up the route.

Tracks List panel

Open the **Tracks List panel** by tapping the **Tracks button** on the pull-out side panel.

The Tracks List panel shows all tracks which are currently on your device.



Tracks in the list can be sorted by tapping the appropriate header in the following order:

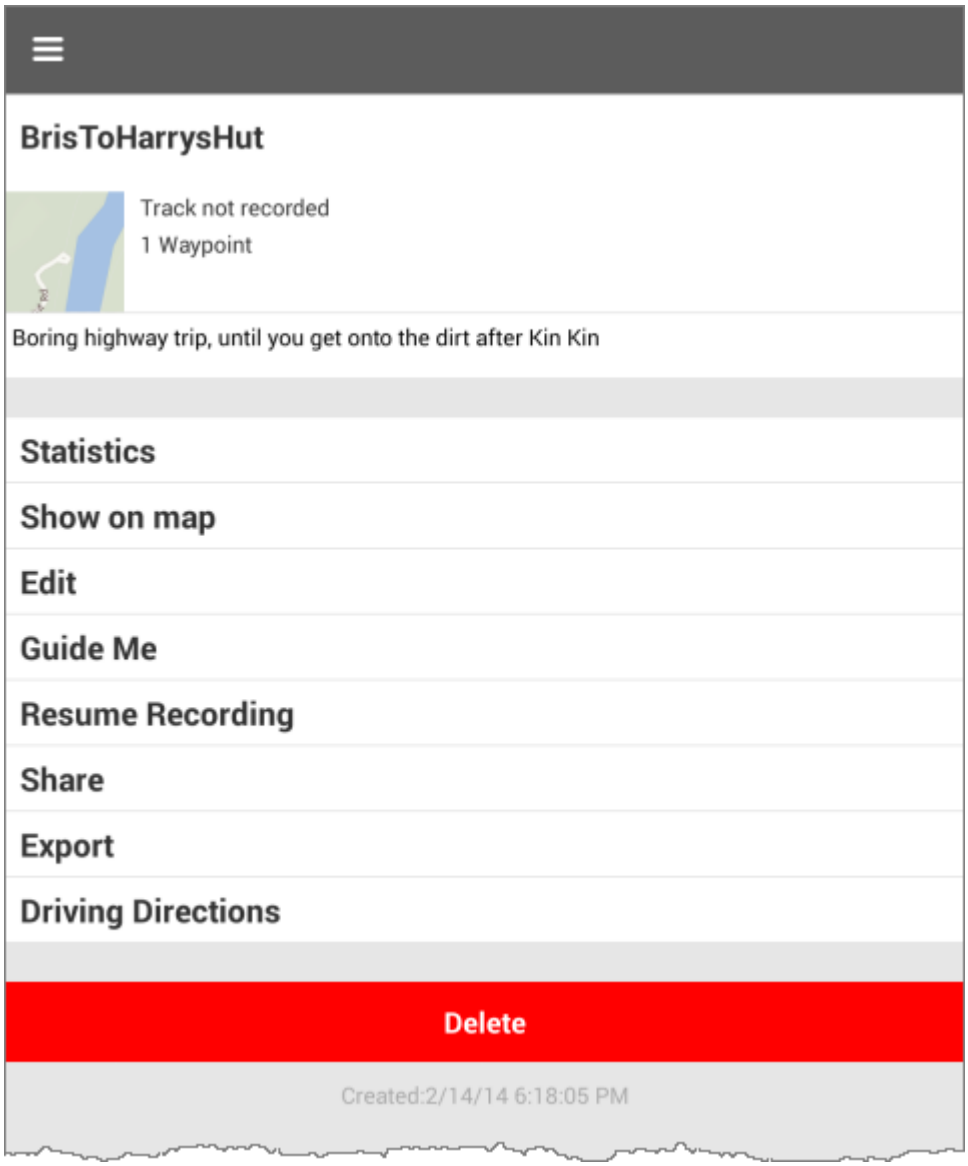
- Name
- Date

If the **Showing button** is switched on for a particular track, then that track will be drawn on the map panel. This allows you to hide whichever tracks are not of interest to you at that time.

If the Sync Data option in the Settings panel is switched on, then tracks shown in the tracks panel are also synced to your Cloud account ***providing they are switched off*** (ie. Showing is deactivated for that track).

Track Details panel

From the Tracks List panel, tapping a particular track will open the **Track Details panel** for that track.

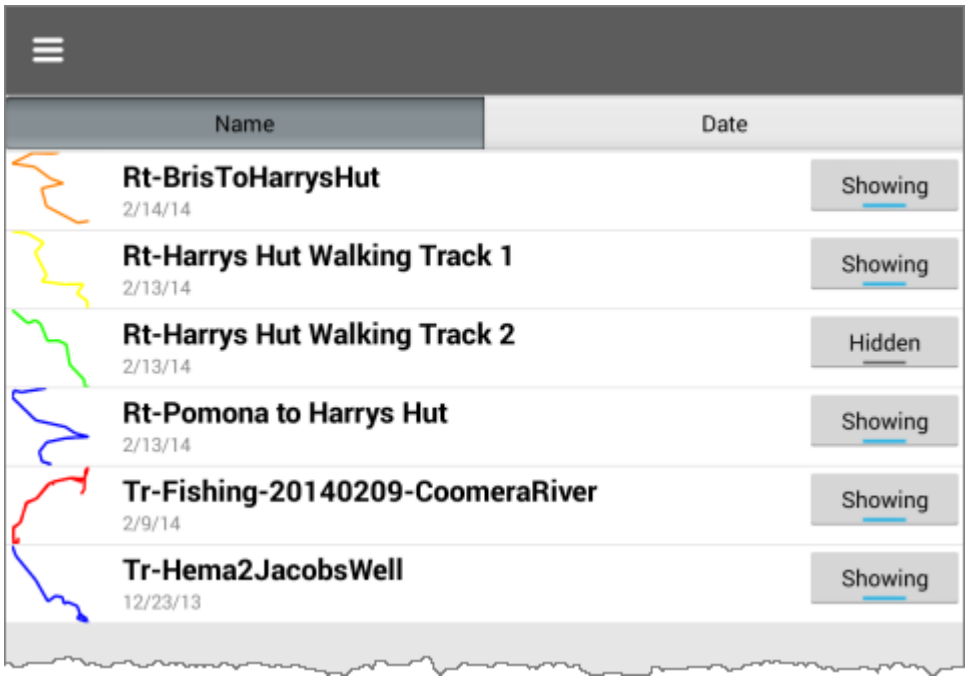


Editing Tracks

The app allows you to modify tracks in the following ways:

- Change the name of the track
- Add notes to the track
- Trim the track by modifying the start and end points
- Determine whether the track is shown on the map panel
- Deleting existing track logs

To edit an existing track, open the Tracks panel by tapping the Tracks button on the pull-out side panel.



Find the track you wish to modify in the Tracks panel, and tap it to open the Track Details panel

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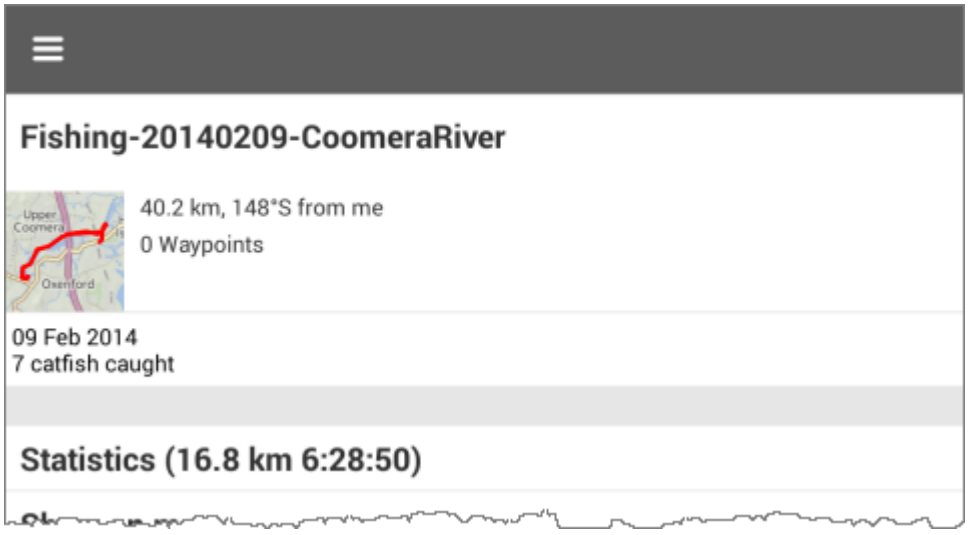
Change a Route or Track's Name and Notes

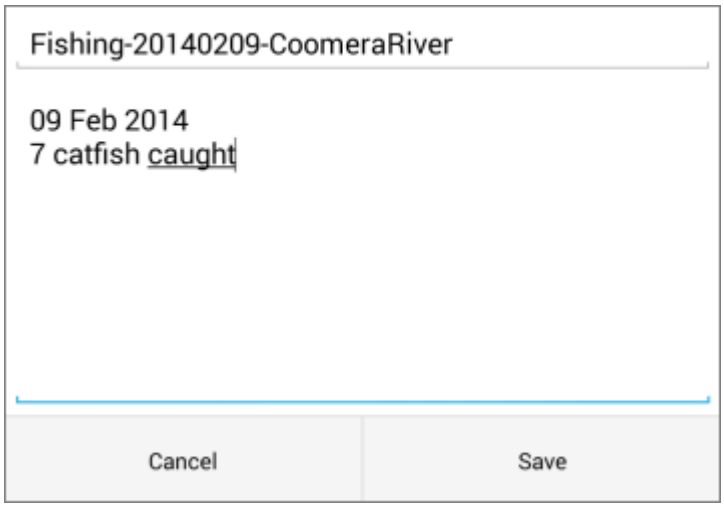
When a track is created by the app, it assigns a default name to the track. You can change the name of the track at any time.

We recommend assigning a good name to the track right from the get-go to avoid confusion and make it easier to locate your track data later. (See the Data Naming Tips in the Trip Panel section of this user guide for more information).

To change a tracks name and add or edit notes associated with the track, tap the track in the Tracks panel. The Track Details panel will open:



Tap the name at the top of the panel (in this case ***Fishing-20140209-CoomeraRiver***) to open the **Edit Name panel**.



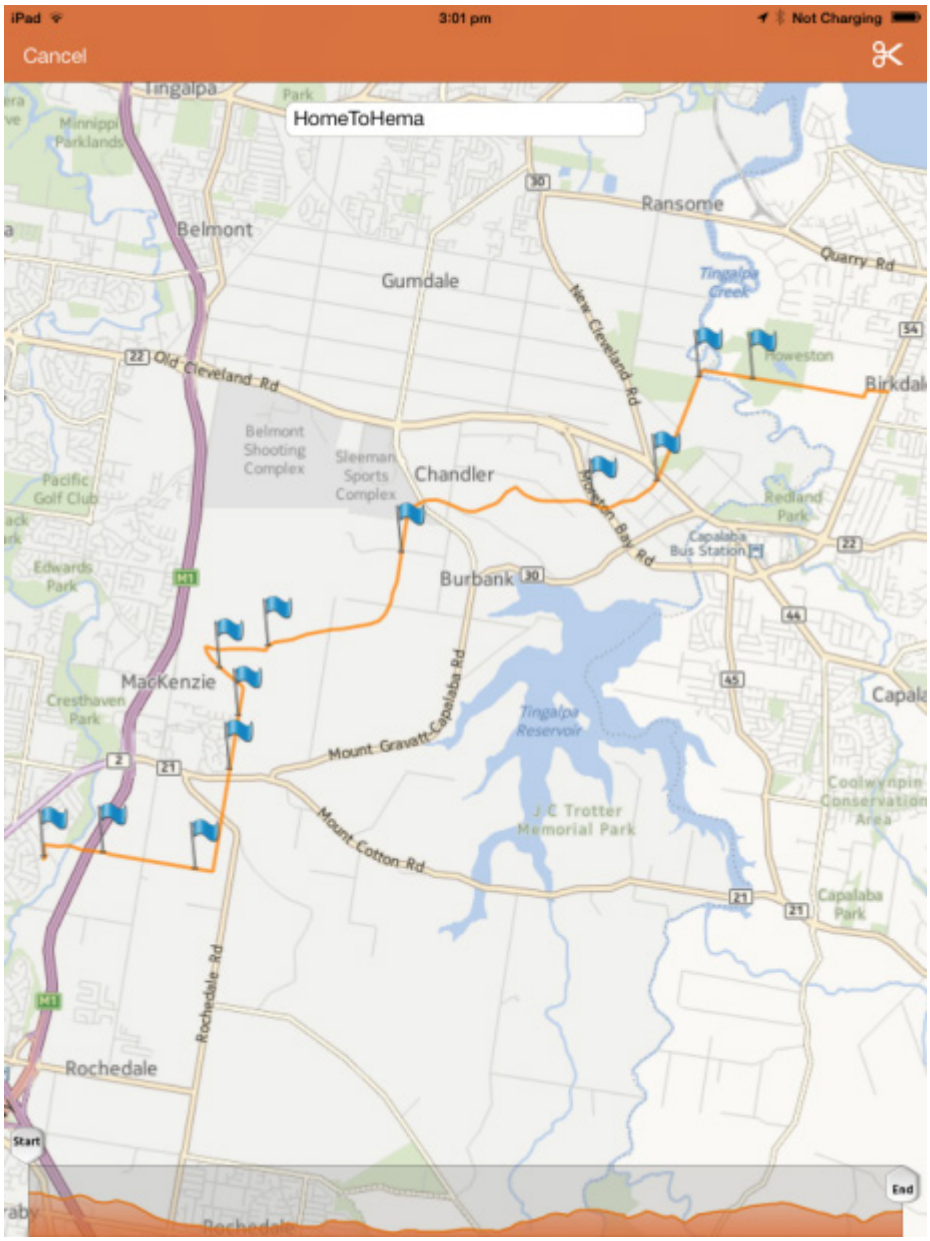
You can modify the Track name, and / or add a note attached to the track here. Once you are happy with the entries, tap the **Save** button. If you change your mind, tap the **Cancel** button.

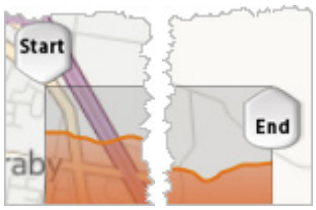
Editing Points within a Route

Trimming a Track

You may have recorded a track, and it has some superfluous data at the start or end of it. You can trim the beginning and end off a track quite simply.

Tap the track you wish to edit. The Track edit screen will appear.

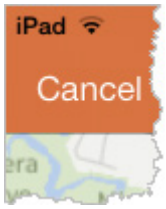




The **Track Start and End handles** can be dragged left and right along the track graph at the bottom of the track edit screen. This allows you to trim the start and end of the track to remove any unnecessary data.

As you drag the handles, you will see that the track displayed on the map is modified in relation to the dragging of the handle(s).

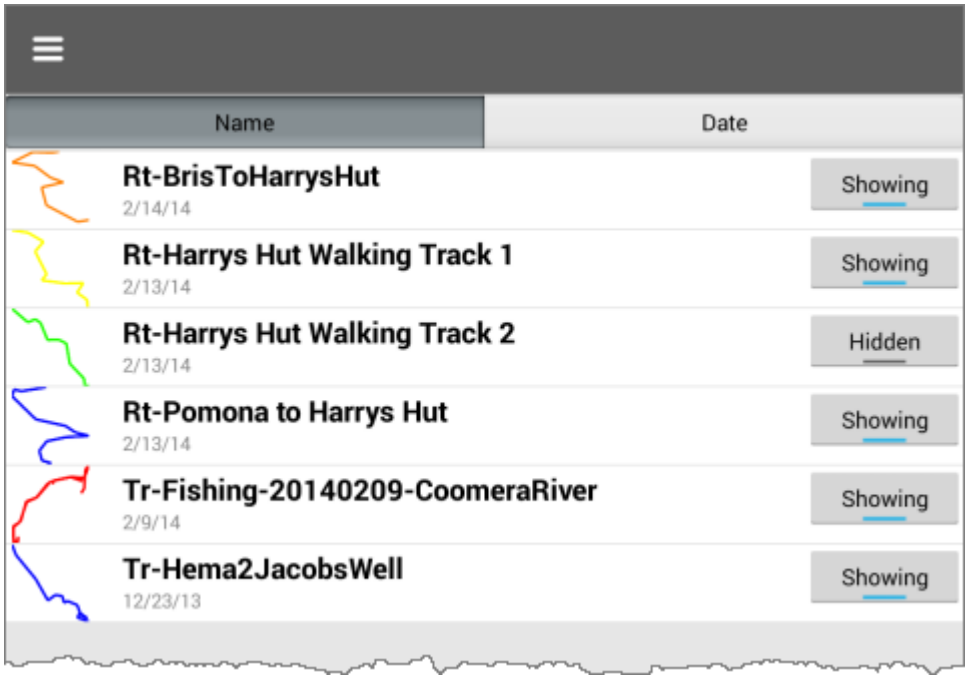
Once you are satisfied with your edits, tap the **Trim button** at upper-right to make the changes permanent.



If you change your mind, or wish to exit once changes have been made, tap the **Cancel button** at upper-left.

Change the colour of a saved track

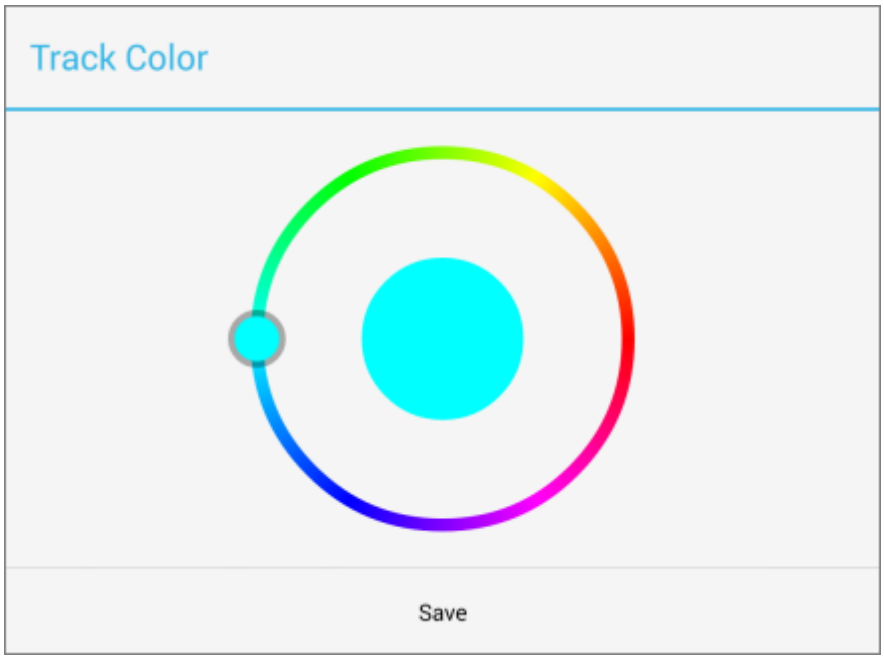
Open the **Tracks List panel** from the side pane by tapping the **Tracks button**.



On the Tracks List panel, find the track whose colour you would like to change.

Tap on the icon to the left of the track's name. This icon may show a map OR track thumbnail.

A colour selector will pop up.



Choose the desired colour for your track by tapping to position the small circle, then tap the **Save button**.

Tap the **Back button** on your device if you change your mind.

You will then see that the track colour on the preview button has changed to match your selected colour.

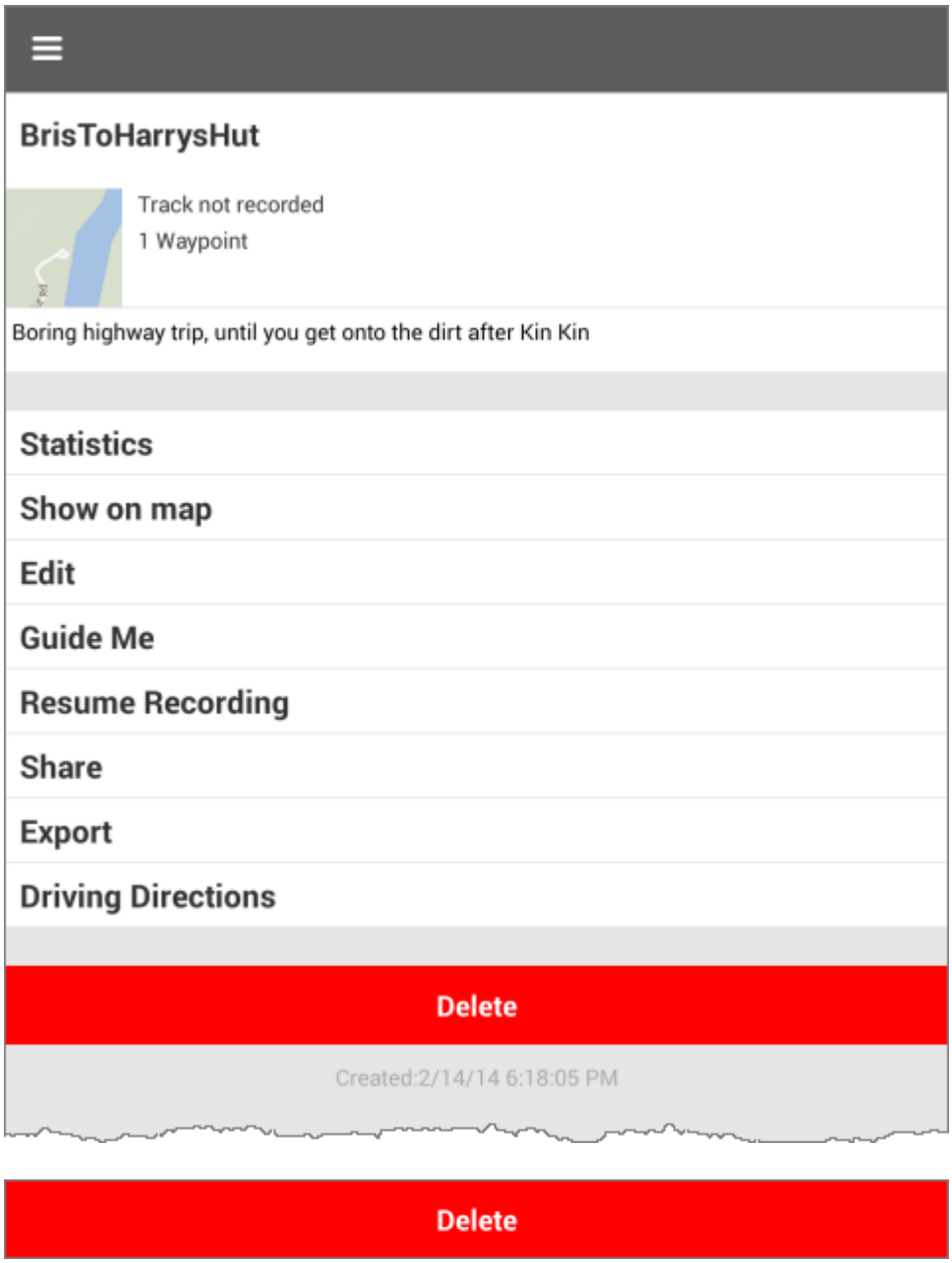
Deleting Tracks

Any tracks which are visible in the Tracks panel can be deleted.

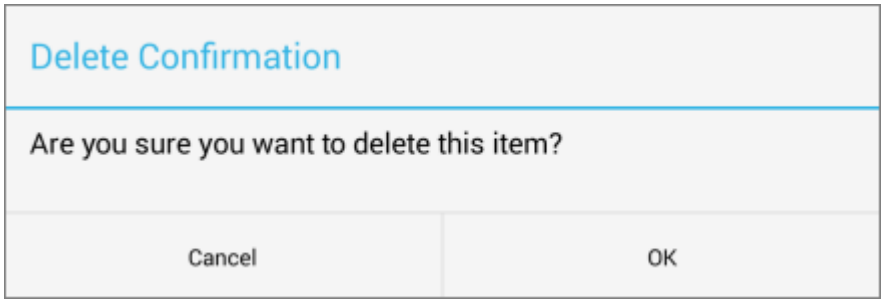
You can delete tracks individually, or delete multiple Tracks with one action.

Deleting a single track

Simply tap the track you wish to delete from the My Data panel.



Then, tap the **Delete button** on the Track Edit panel.



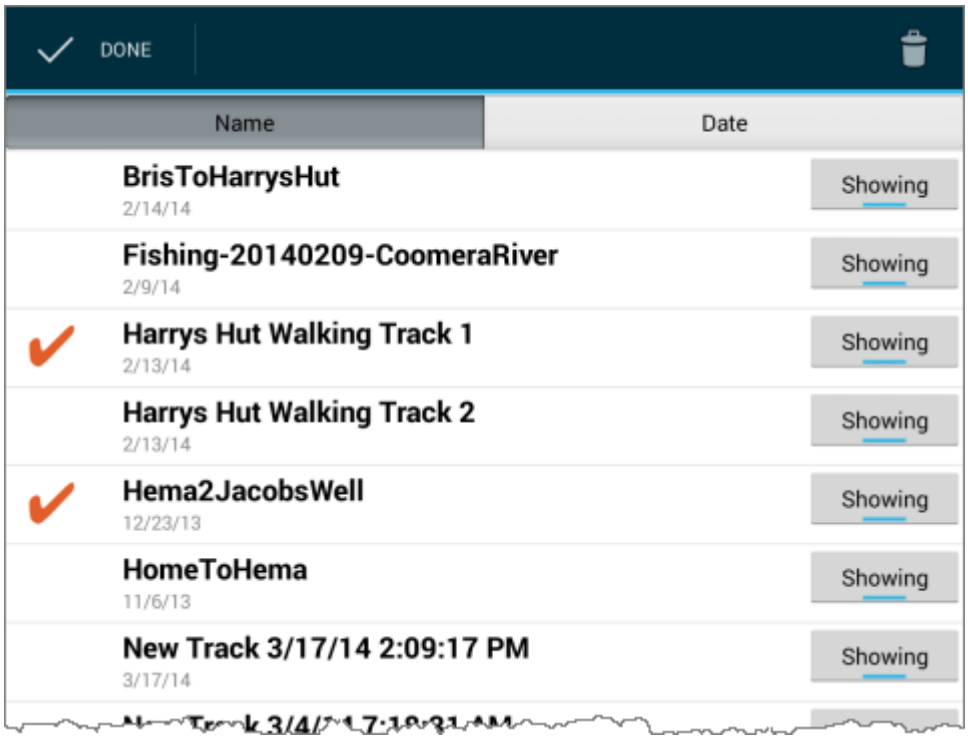
You will be prompted to confirm that you wish to delete the selected track log. Be sure you wish to delete the item before tapping the **OK button**. If you change your mind, simply tap the **Cancel button**.

WARNING
When you delete a track log, it will also be deleted from your Hema Explorer Cloud account when Cloud Sync is switched on.

Deleting multiple tracks

You can delete multiple tracks in one action from the Tracks list.

Simply tap-and-hold on one of the tracks you wish to delete. The selected track will be ticked.



You can then tap on any of the other tracks you wish to delete. Each track you tap will be selected, as indicated by the tick mark.

Once you have selected the required tracks for deletion, tap the **Rubbish Bin button** at upper-right.

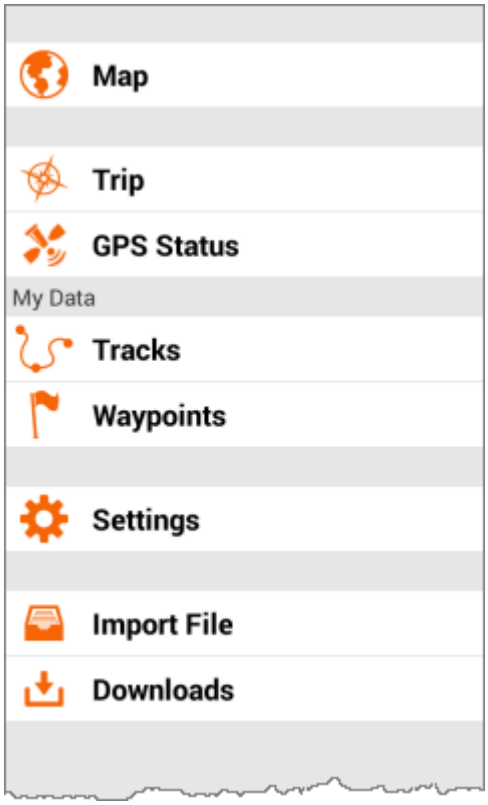
Warning!
You will NOT receive a confirmation prompt when you tap the Delete button! The selected items will be deleted immediately. Make sure that you wish to delete this data before you tap the Delete icon.

If you change your mind, tap the **Done button** without making any changes.

Waypoints panel

Any saved data such as tracks, waypoints and routes can be accessed from the **My Data** section of the pull-out side panel.

To access saved Waypoint data, tap the **Side panel button** at the top-left of the screen.

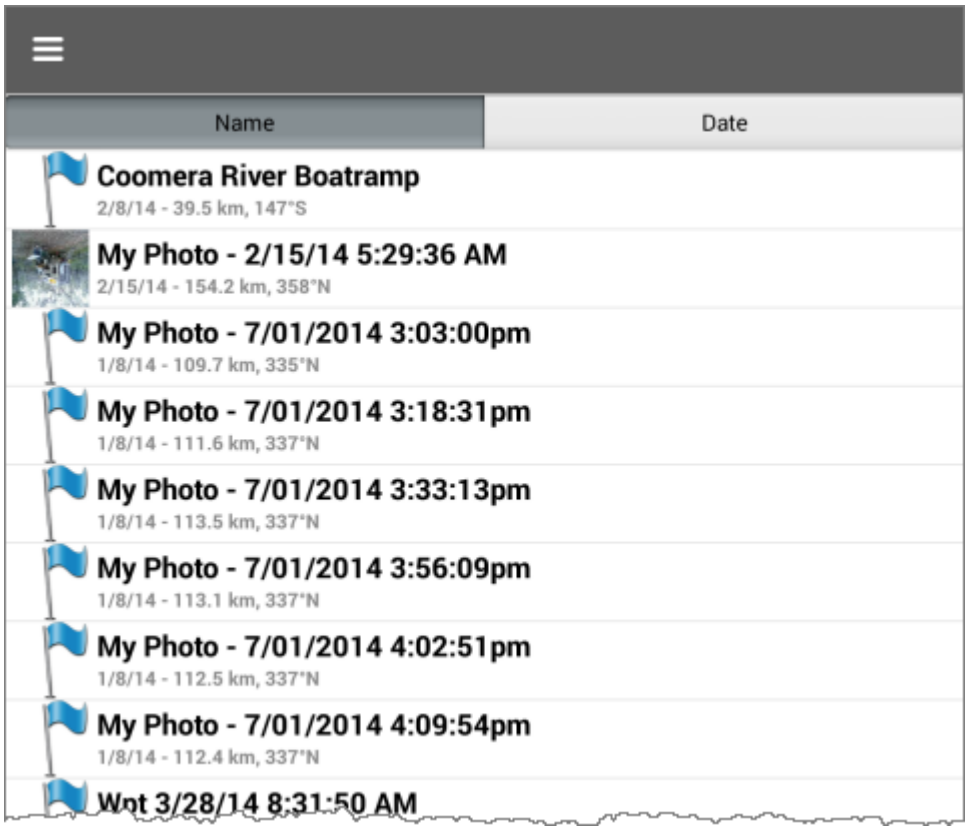


Under the **My Data section** of the side panel, there are two sub-sections:

- Tracks
- Waypoints

Note
The Tracks section contains both Tracks and Routes

Open the **Waypoints panel** by tapping the **Waypoints button** on the pull-out side panel.



The Waypoints panel shows all waypoints which are currently on your device.

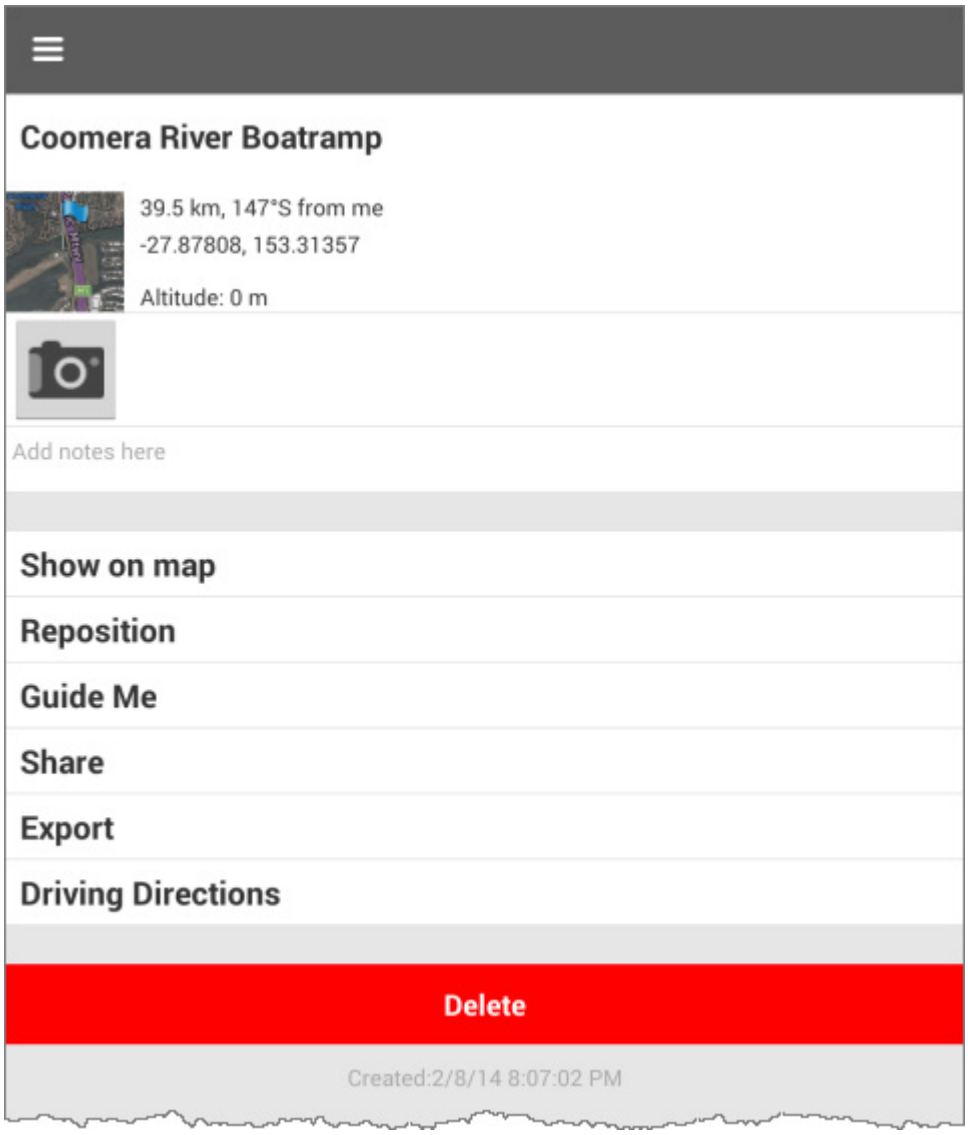
Waypoints in the list can be sorted by tapping the appropriate header into the following order:

- Name
- Date

Waypoint Details panel

Tap a waypoint in the Waypoint panel to open the **Waypoint Details panel**.

Note
You can also view a Waypoint's details by tapping the waypoint nametag of a waypoint selected on the map panel.



The Waypoint Details panel shows a number of items related to the selected waypoint.

The top section of the panel shows a number of items related to the selected waypoint:

- Waypoint Name
- Preview of waypoint location on map (can be tapped to expand)
- Distance and bearing from your current position
- Position
- Altitude
- Any photos which are added to the waypoint (you can add a photo by tapping the Image Capture button)

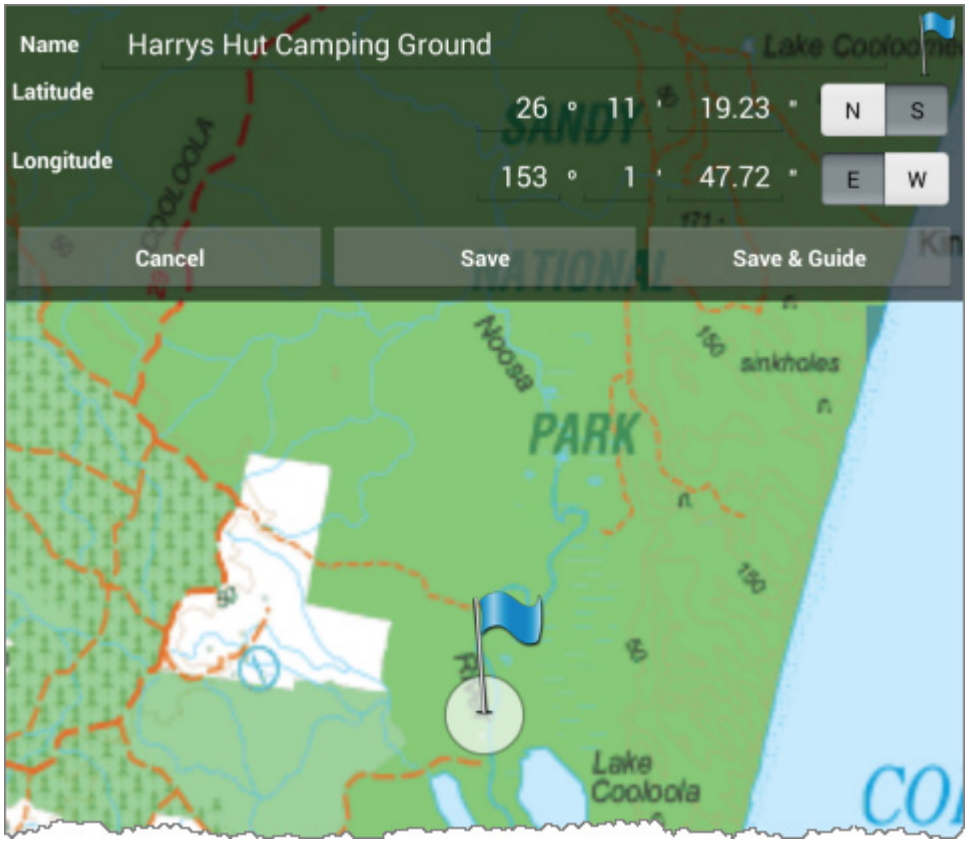
The section below that includes functions which you can perform on the selected waypoint, such as:

Show on map

Shows the waypoint on the map panel

Reposition

Allows you to move the waypoint to a new location. Opens the screen shown below, allowing modifications to be made to the waypoint name, and position.



Guide Me

The Guide Me function will guide you to the selected waypoint *as the crow flies*.

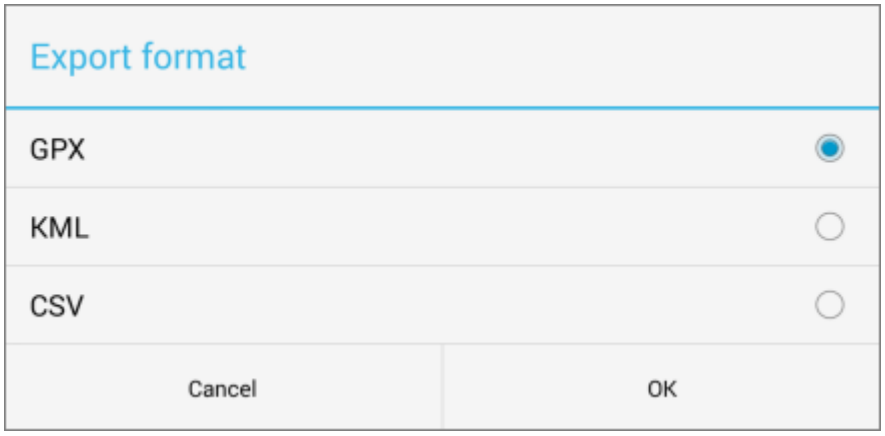
Share

The **Share button** will generate a link which can be sent via email to a friend etc. allowing them to view this mark within the Hema Explorer Cloud.

MORE INFO REQUIRED!

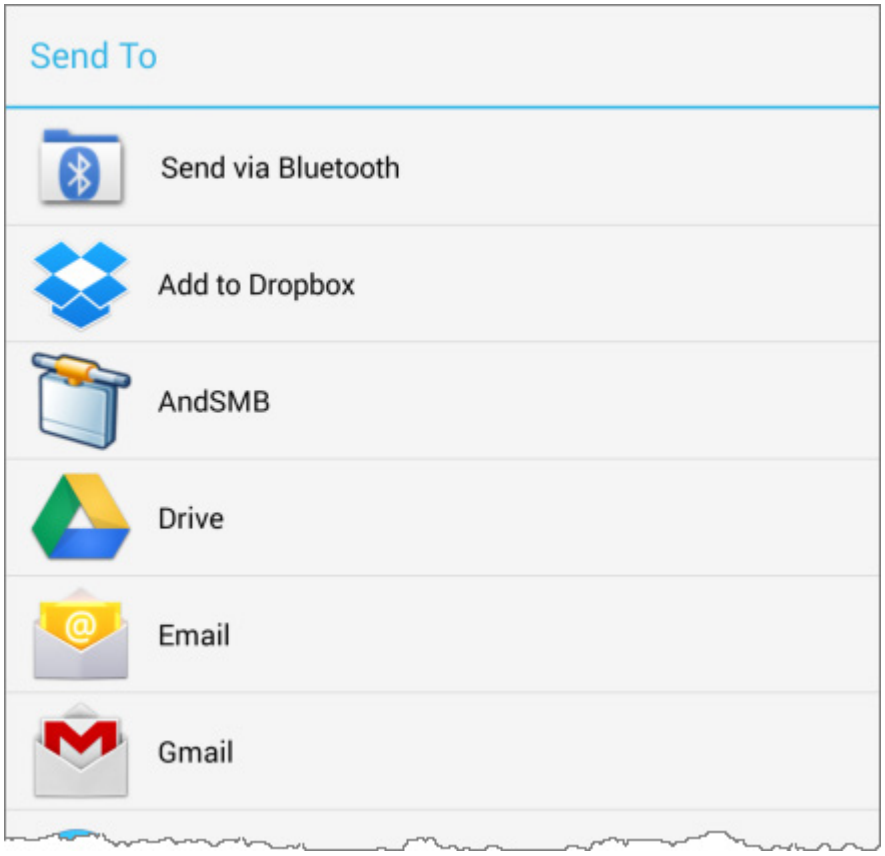
Export

The **Export button** allows you to save the selected waypoint in a number of formats (currently GPX, KML, or CSV).



Once you have decided on the format you want, a panel will open allowing the file to be stored almost anywhere your device is capable of. This might be sending via email, or storing in Dropbox or Google Drive.

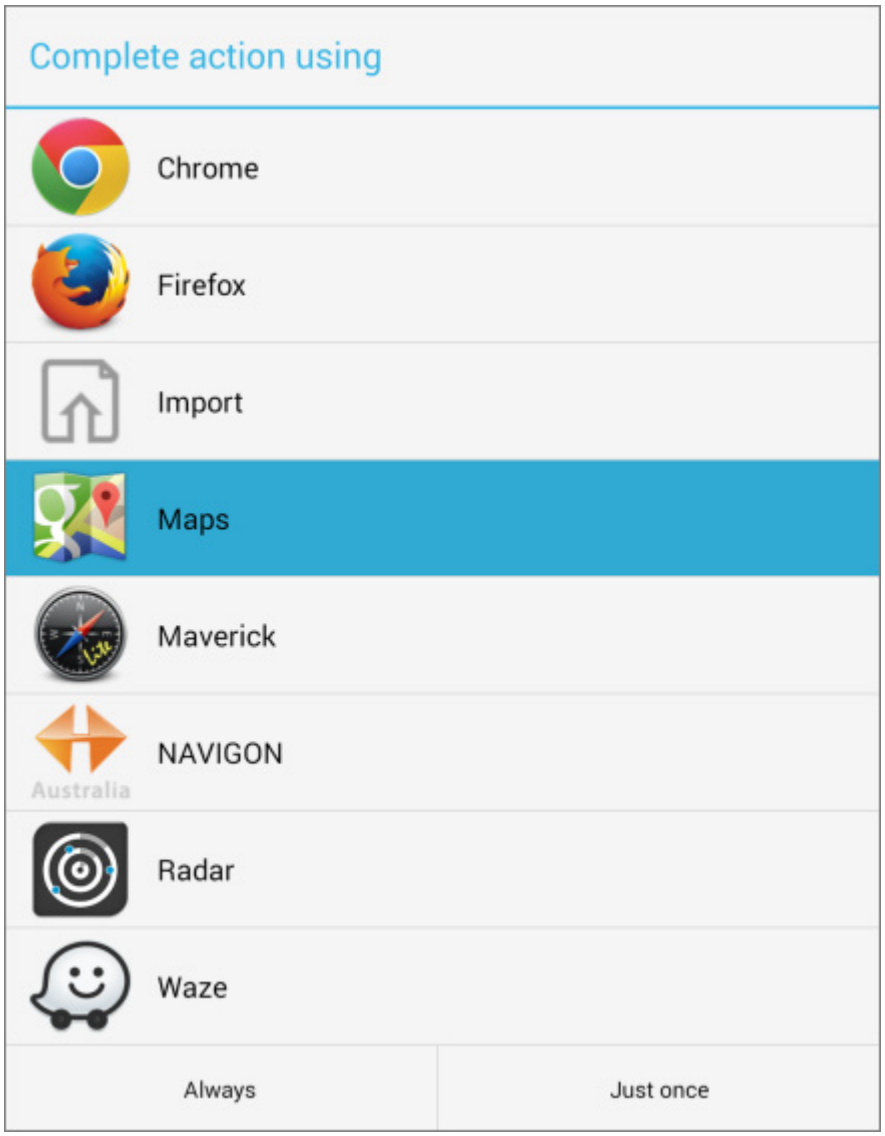
Note
The options which you see here will be specific to your device, and which apps you have installed etc. We do not provide support for using these external functions. ie. We are making the assumption that you know how to configure and use Dropbox etc.



Driving Directions

Tapping the Driving Directions button will prompt you to open the current waypoint as a destination in a number of other apps. This means that *Hema Explorer* will pass the waypoint position to the selected external app for processing. Some other Navigation apps will work and some will not.

Note
The options which you see here will be specific to your device, and which apps you have installed etc. We do not provide support for using these external apps. ie. We are making the assumption that you know how to use Google Maps etc.



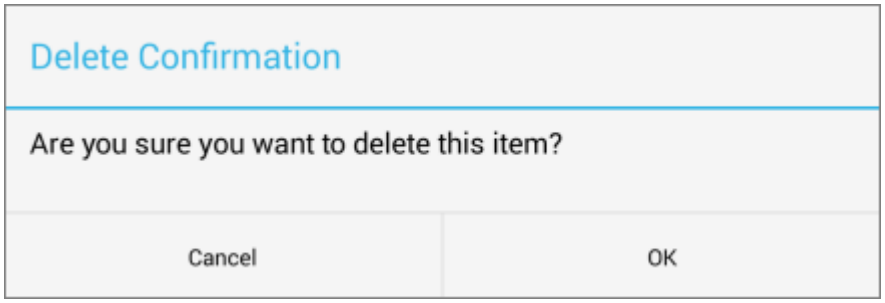
Choose the external app which you want to send the current waypoint to.

You can select whether to always use your selection using the two options at the bottom, **Always**, or **Just Once**.

Deleting Waypoints

Delete

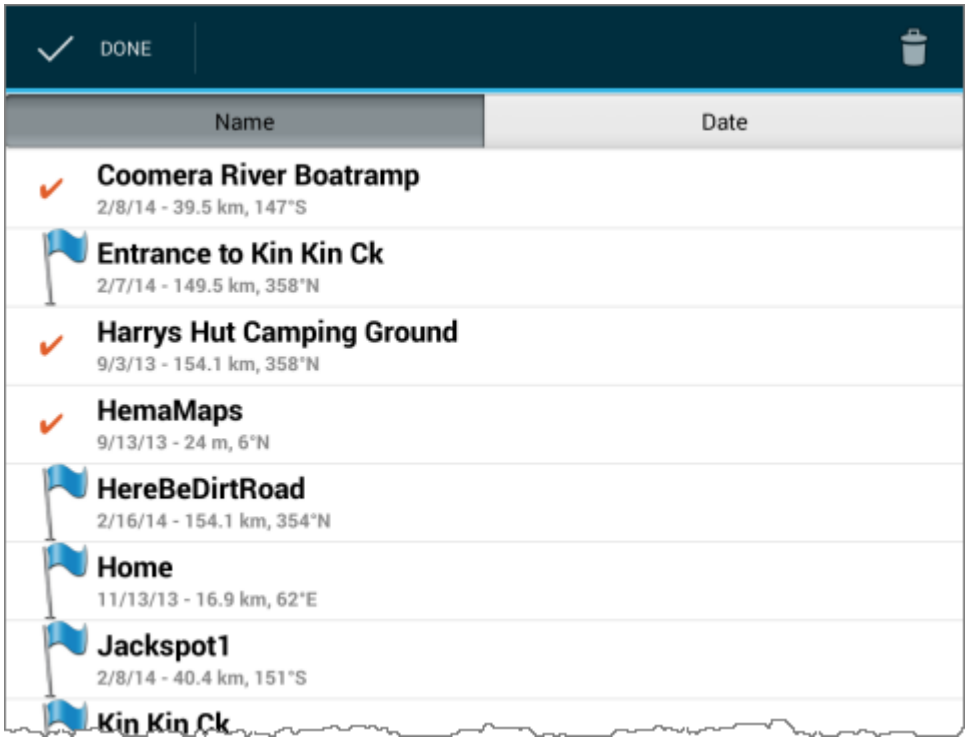
The **Delete button** on the waypoint details panel will delete the selected waypoint. You will be prompted to confirm your action as shown below:



Tap **OK** to permanently delete the selected waypoint. Tap **Cancel** to keep the selected waypoint.

Deleting multiple waypoints

If you have a lot of waypoints to delete, it can be time consuming deleting them all individually. Fortunately, you can select multiple items, and then delete them all in one go.



One the Waypoints panel, tape-and-hold on any waypoint (it would make sense for it to be one that you actually DO wish to delete).

The selected waypoint will display a tick mark on the left to indicate that it is ***selected***.

Simply tap on any other waypoints you wish to delete in this operation to select them, then tap the garbage can icon at upper-right. This will delete ALL selected items.

WARNING!
You will **NOT** be prompted to confirm your action when you tap the garbage can icon, and this action is not reversible, so be sure that what you have selected is exactly what you wish to delete.

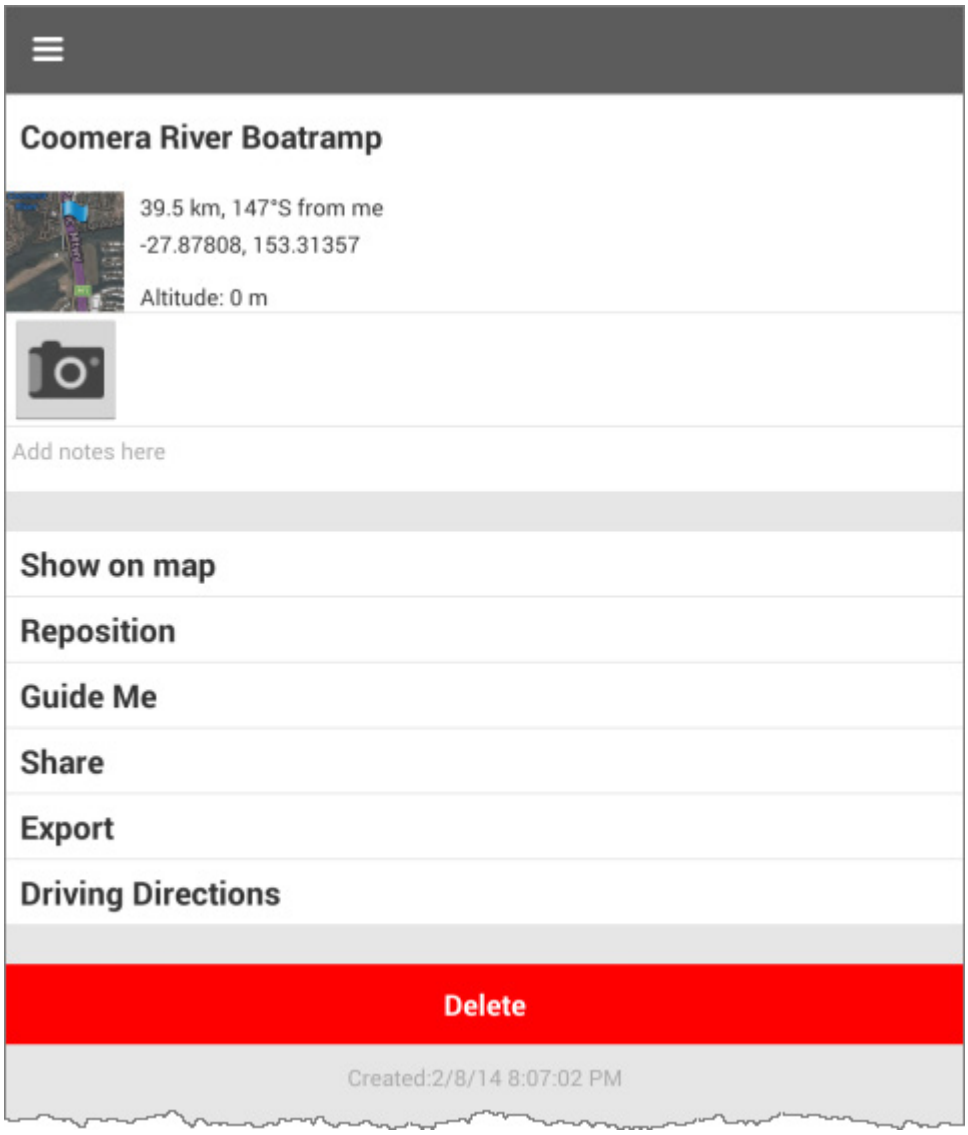
Editing Waypoints

There are 2 methods which you can use to edit an existing waypoint

1. Tapping once on a Waypoint icon will open the POI Nametag. You can then tap the Waypoint handle to open the **Waypoint details** panel, then tap the **Edit button** on the panel.
2. Go to the MyData panel, tap on the waypoint required, which will display the **Waypoint details** panel, then tap the **Edit button**.

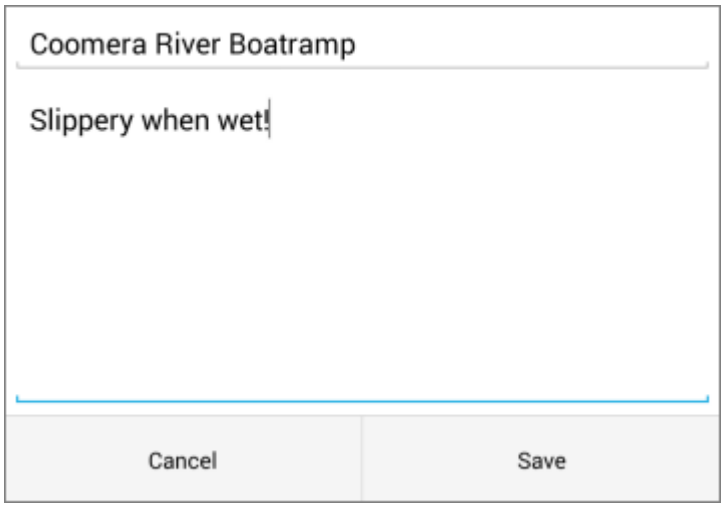
Whichever method you use to get to the Waypoint details panel, it will look the same.

Changing a Waypoint's Name and Associated Notes



If you wish to edit the waypoint's name or associated notes, tap the **Name** or **Notes** field on the Waypoint details panel. (the notes field in this example is empty, and therefore shows the text ***Add notes here***.

This will open the **Waypoint Name & Notes Edit panel**, as shown below.



You can modify the waypoint name, and optionally enter some notes to describe the waypoint, or call out safety hazards etc.

When you have finished editing the name and/or notes, tap the **Save button** to make your changes permanent, or the **Cancel button** to exit without saving your changes.

Adding an image to an existing Waypoint

NOTE
Features related to image capture are only available on devices equipped with an internal camera. If your device does not have an internal camera, the function may not work, or may not be visible. The image capture / camera controls displayed on your device may not be the same as those shown here. All devices which have in-built cameras will have some common elements, but their appearance, additional features, and level of sophistication may vary widely depending on the device.

You can attach images to an existing waypoint, or you can use the Take Picture option on the Waypoints menu to create a new waypoint from a picture.

If your device has a built-in camera, then you will see a button on the Waypoint details pane which allows you to take one or more pictures which are attached to that waypoint. The function uses the device's image capture function. The controls shown here may be different to those on your device.

Once the image has been captured, you will see a preview image, with the options below:

Tap the **Accept button** if you are satisfied with the image, and wish to save the captured image.

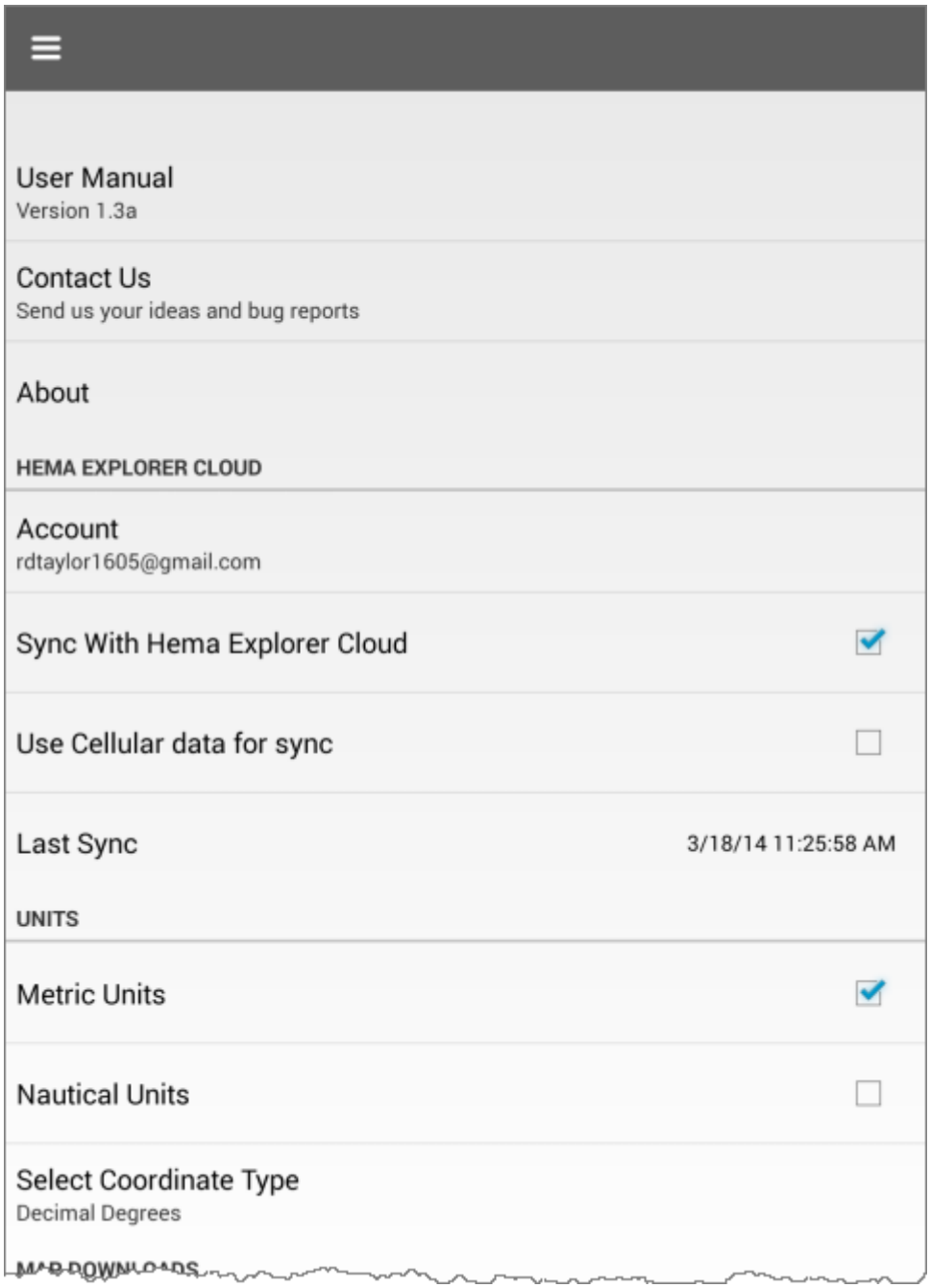
Tap the **Redo button**, if you do not want the image you captured, and wish to shoot a new image.

Tap the **Cancel button** to exit the image capture process without saving your image.

The captured images will sync to your Hema Explorer Cloud account.

Settings Panel

The **Settings panel** is opened by tapping the **Settings button** on the left-hand slideout panel.



(due to it's size, the entire panel is not shown here)

The Settings panel is split into separate panes (sections). Each pane is described below.

Help Pane

The Help pane displays the current app Version number, along with some buttons allowing access to other features.

User Manual

The **User Manual button** open a panel containing a quick user help screen, with a quick overview of the main buttons and functions to get you started.

Contact Us

The **Contact Us function** allows you to send information to the Hema Tech Support Portal via email.

> Note
> To use this feature, an email account must be configured on your device.
> Please see your device documentation / help regarding configuration of an email account.
> This is NOT the same as the account which you use with the Hema Explorer Cloud!

You can also "manually" submit a ticket to the system by going directly to the Hema Tech Support Portal URL:

http://hema.helpserve.com

The Hema Tech Support Portal also contains a Knowledegbase, where you can find articles which may answer your questions or be of assistance in using the app.

About

The **About function** opens a web page containing various pieces of information, such as the Terms & Conditions of use of the app and the Cloud.

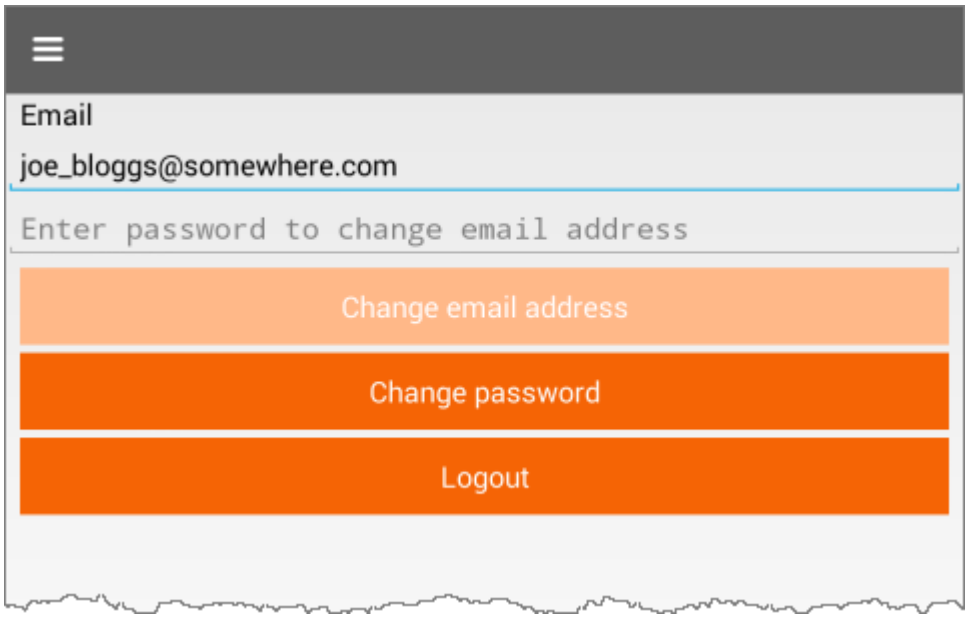
Hema Explorer Cloud pane

The Hema Explorer Cloud pane within the Settings panel contains settings and statuses related to the apps interaction with the Cloud.

Account

If you have an active Hema Explorer Cloud account which is linked to the app, the username will be displayed here.

Tapping this button will open the **Account details panel**.



On the Account Details panel, you can do the following:

- Change the email address which is liked to the app on your device
- Change your password
- Logout

Sync With Hema Explorer Cloud option

If this option is active (ticked), then the app will attempt to sync any changed data when it has an active internet connection.

Use Cellular data for sync

This option will cause the device to use a cellular connection (if one is available) for data sync.

Warning!
Your ISP may charge for excess data consumed on your plan, and these charges can sometimes be excessive.
It is up to you to monitor and manage your data on a mobile data plan.
Any data downloads should be done while connected to a fast stable internet connection, for example, ADSL via WiFi at home.

Last Sync

The **Last Sync button** shows the date / time that the last successful sync operation was performed.

Tapping the button will force start a manual sync operation

Units pane

Metric Units

Turn this option ON if you prefer to see speeds and distances etc. in Metric format.

Nautical Units

Turn this on if you prefer your units in nautical format. If switched on, the app will display distances as **Nautical Miles** and speeds as **Knots**.

Select Coordinate Type

Tapping this option will allow you to select from the following list of supported coordinate formats:

- Decimal Degrees
- Degrees, Minutes, Seconds
- Degrees, Decimal Minutes
- UTM Coordinates
- MGRS Coordinates

Map Downloads pane

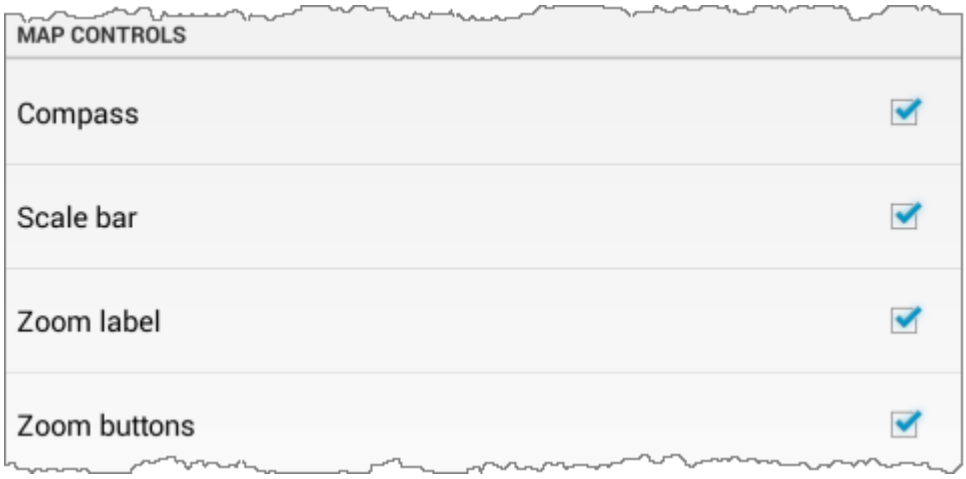
Auto Resume

When switched on, this option will restart any partial downloads when the app starts up.

Check Downloads

This option will perform a sanity check on any downloaded maps.

Map Controls pane



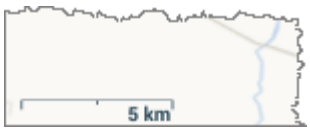
Compass

This option determines the visibility of the on screen compass.

The Compass appears at the top-center of the map panel.

Scale Bar

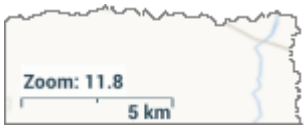
This option toggles the visibility of the on screen scale bar. The size and scale shown will vary depending on the current zoom level. The units displayed are determined by the Units settings.



The scale bar appears at lower-left of the map panel.

Zoom Label

This option determines the visibility of the on-map **Zoom Level indicator**. The Zoom Level indicator tells you at which zoom level you are viewing the current map.



The zoom label appears at lower-left of the map panel, adjacent to the Scale Bar (if it is also switched on).

Zoom Buttons

This option determines the visibility of the on-map zoom buttons. You can zoom in and out of the map using pinch and unpinch gestures, but sometimes this is inconvenient, for instance if you do not wish to lose your current position while zooming. Tapping the zoom in / out buttons on screen will perform the same function as pinch / unpinch, but will not lose your position fix.

The zoom buttons appear at the bottom-right of the map panel.

Storage pane

Root folder

The Root folder parameter allows you to specify a different location for storage of the app data.

If your device has an external SD card for example, you could tell the app to use the external SD card storage, which will help stop the device's internal storage filling.

NOTE
If you wish to utilise an external SD card for storage, it is wise to do so *before* you start downloading maps etc.
If you have already downloaded basemaps etc. within the app, when you change the Root folder storage location, there will be a delay while the content is copied from the old storage location to the new location.

Do not change this setting if your device does not have additional storage (ie. external SD Card)! There is no point in changing the folder to another folder which still resides on internal memory - you will not be gaining anything by doing this.

Clear Automatic Map Cache

Over time, the app can accumulate a fair amount of data (map tiles being an example) in the internal cache. You can periodically clear the cache using this option.

Advanced pane

Send logs

Allows you to send the logfile from the application directly to the Hema Tech Support Portal (normally) via email.

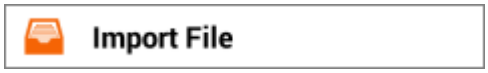
Generally, you would only do this under the direction of a Tech Support consultant. If you DO use this option directly, and wish to submit a support request via this email, please supply information in the email to assist the tech support people in sorting out the issue.

Use uncorrected altitude

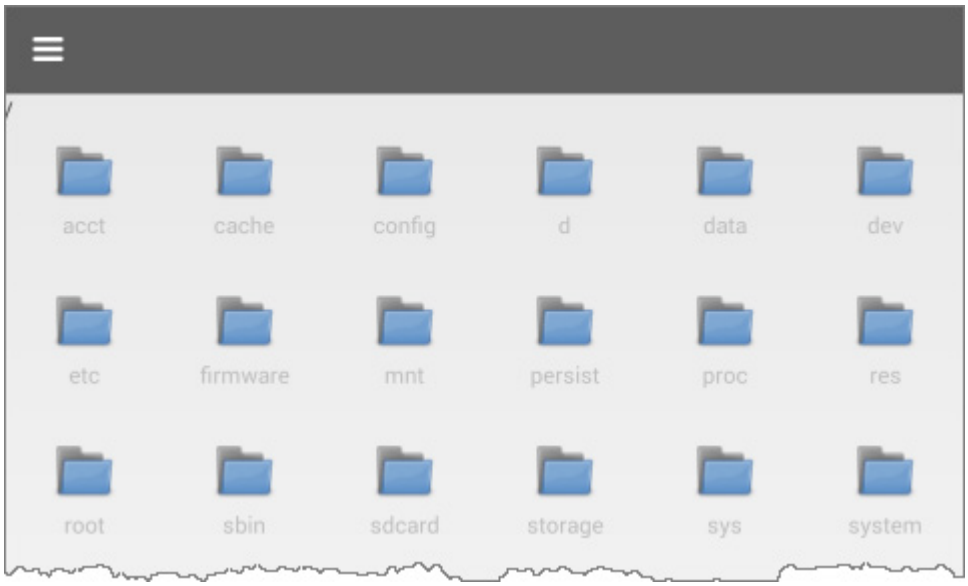
On some devices the hardware attempts to auto-correct altitude information calculated by the GPS hardware. Sometimes this produced undesirable results.

This option should be switched off by default, and only switched on if your specific device seems to have issues with calculating altitude.

Import File



The **Import File function** will open an explorer-like interface on your device.



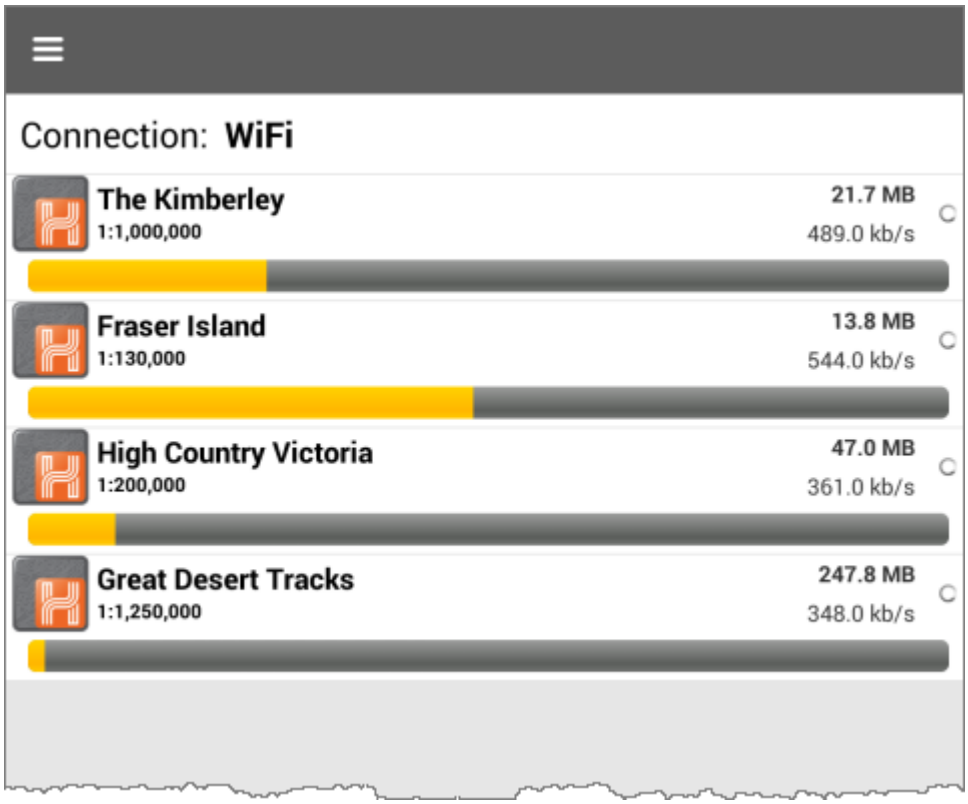
You can browse through your device's folders to find a file which has been stored previously.

The Import file function is capable of loading files in both GPX and KML formats.

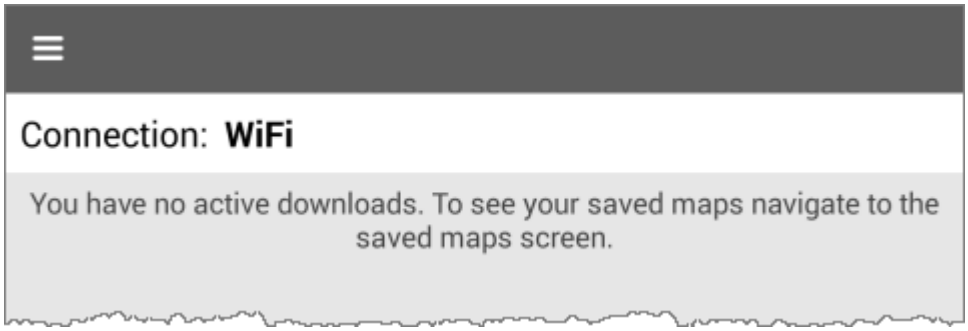
Downloads panel

Tapping the **Downloads button** on the side panel opens the **Downloads panel**.

The Downloads panel shows the status of any queued downloads, as shown below:

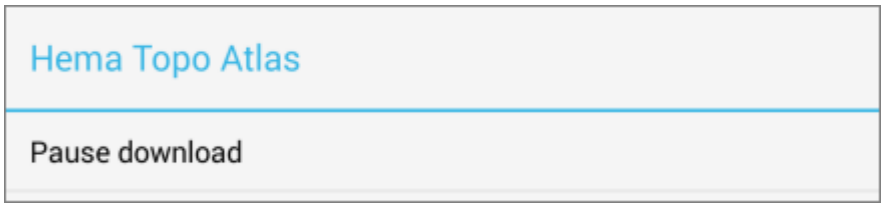


If there are no active downloads, the panel shows this:

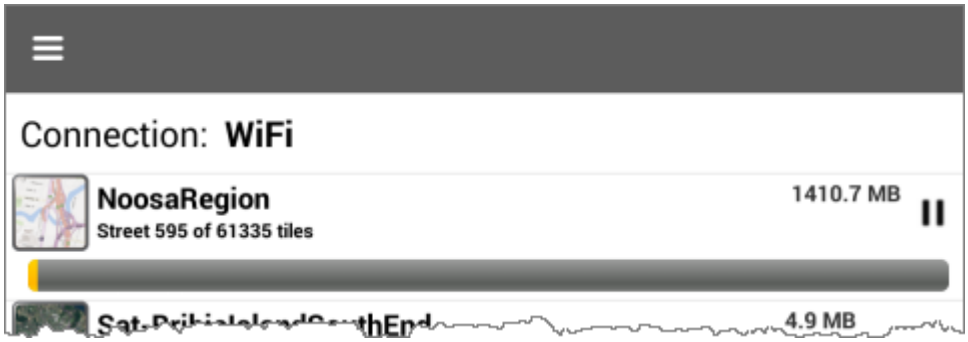


Pausing Downloads

Tap-and-hold an entry in the download list, then tap the **Pause Download** button to pause the download. Note that if basemaps are paused, the Pause dialog does not have the **More Info** option, as shown below.

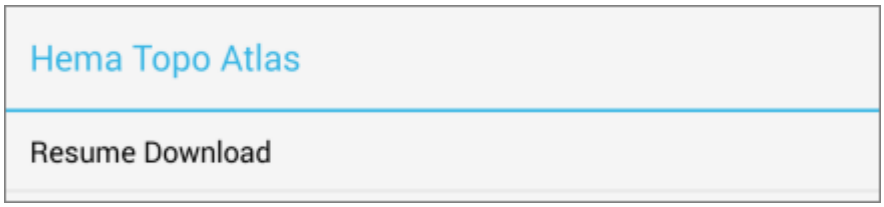


The map download entry will display a pause icon while it is in pause mode, as shown below.



Resuming Paused Downloads

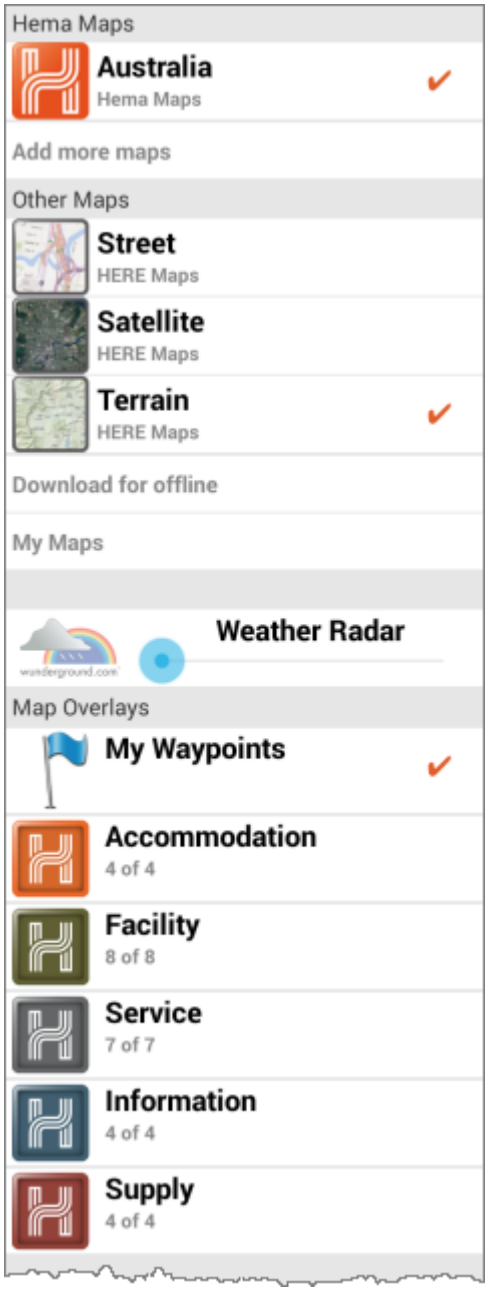
Tap-and-hold on a paused map download in the list, and tap the **Resume Download button** to continue the download. Note that if basemaps are resumed, the Resume dialog does not have the **More Info** option, as shown below.


Hema Topo Atlas
Resume Download

Layers panel

Introduction

The **Layers panel** is accessed by tapping the **Layers button** on the app titlebar.



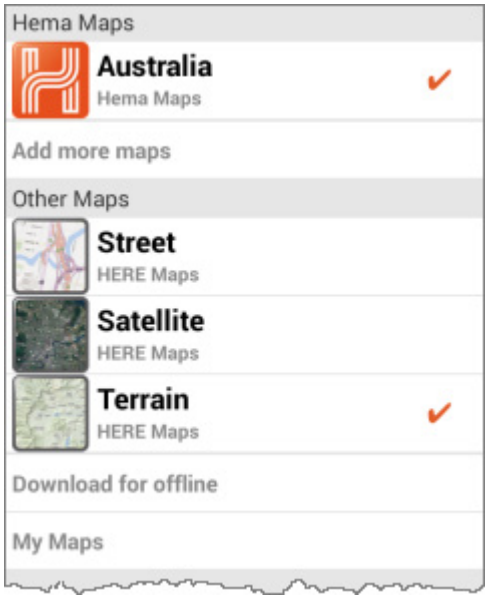
The Layers panel displays the different layers which make up the map display area of the *Hema Explorer* app.

Layers consist of

1. Maps
2. Weather Radar control
3. Waypoints
4. POIs

Maps

The Maps information can be found by tapping the **Layers button** on the app titlebar.



The maps within the app can be divided into these categories:

1. Hema Maps

   The Hema Maps consist of the 1:1M Road and 1:250K Topo maps supplied as part of the app purchase, and downloaded when you first started the app. You may also have additional Hema Maps which have been purchased from within the app.

2. Other Maps

   The Other Maps included within the app consist of a number of layers provided by HERE Maps (Nokia). These include:

   - Street
   - Terrain
   - Satellite

These map layers are not available in their entirety for offline use due to size and licensing restrictions.

3. Downloaded map sections

You can select areas of the third party map layers to download for offline use. For more information, see the section on Managing Maps in this user guide.

4. My Maps

The My Maps section of the layers menu allows you to manage any map areas which you have downloaded. For more information, see the section on Managing Maps in this user guide.

Weather Radar display

Weather information within the *Hema Explorer* app comes in the following form

- A static weather overlay shown on the map

In app weather data is provided by **Weather Underground** (http://www.wunderground.com)

This section explains details of the Weather Radar overlay.

The Weather Radar overlay can be found by tapping the **Layers button** on the app titlebar. The current Weather Radar setting is seen under the Weather Radar label on the Layers panel.

Weather can be displayed over the map by dragging the slider on the Overlays pane to the right.

The weather information is switched OFF when the slider is all the way to the left.

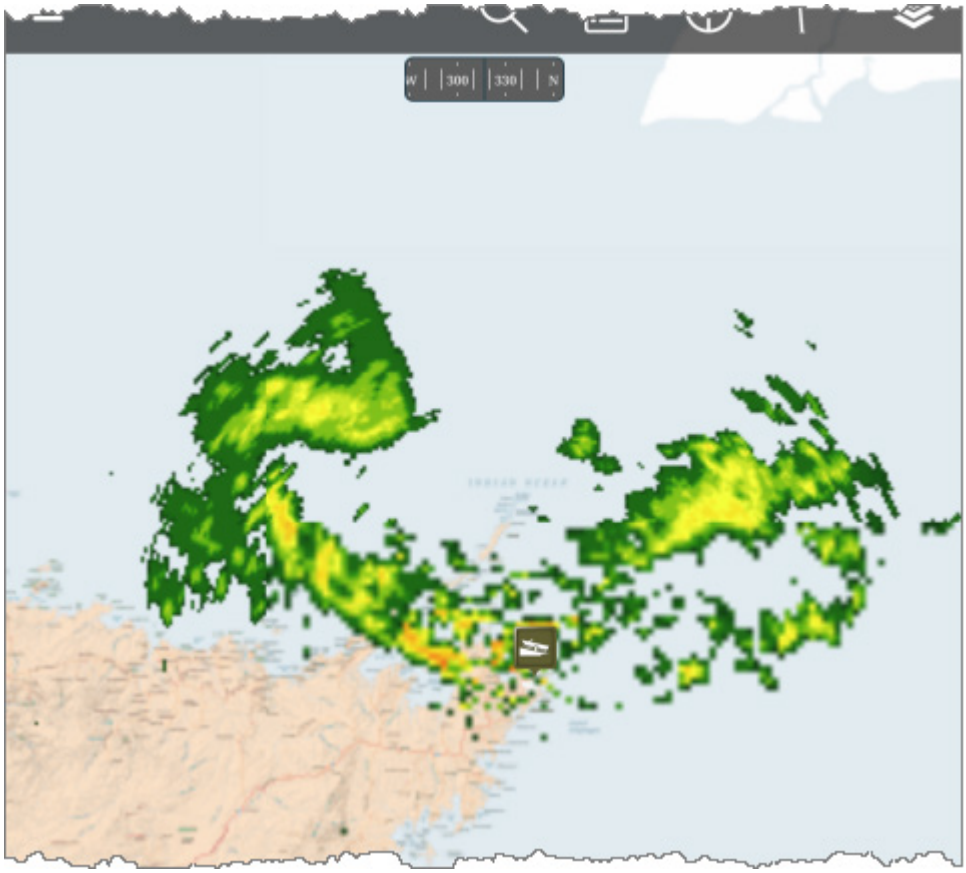
As the slider is moved to the right, the weather display is switched on, and becomes more opaque the further to the right the slider is dragged. The weather slider control changes weather display from off to 100% transparent to 100% opaque.

Weather info is shown on a separate layer overlaid over the map.

NOTE

Weather info only appears at zoom levels from max to approx. 7.5, as the source data is only available at these zoom levels. If you do not see weather data shown, try zooming out until you see it.

An example of the Weather Radar overlay is shown below:



My Waypoints

The My Waypoints layer can be found by tapping the **Layers button** on the app titlebar.

You can toggle display on and off of all saved waypoints by tapping the My Waypoints control on the Layers panel.

Waypoint display is on when there is a tick displayed next to My Waypoints on the Layers panel.

POIs

Information related to POIs is contained within the POIs section of this user guide.

POIs

A note about Waypoints vs. POIs

While POIs (Points of Interest) and Waypoints are both used to mark a single specific location, there are some significant differences between Waypoints and POIs:

- POIs are normally supplied by the app developer (usually as part of a package of POIs)
- You cannot usually edit any of a POI's properties (such as position or name) as the properties are set by the creator.
- Waypoints are normally created by the user, or sourced from a friend, or the internet, etc.
- The properties of a waypoints can be edited to suit yourself.

You may occasionally hear of "Rich POIs". Rich POI is a term used to describe a POI which has more information associated with it. An example might be:

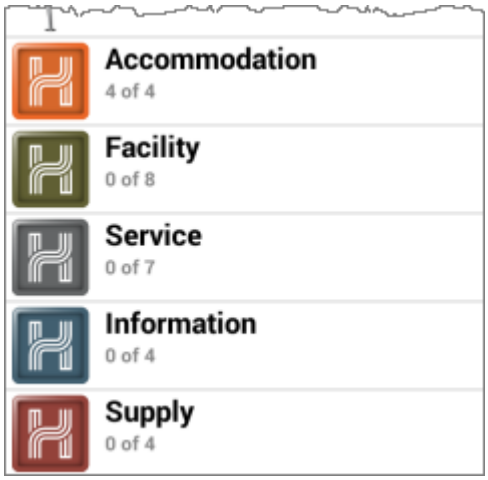
- A standard POI shows the location of a camping ground only
- A Rich POI of that same camping ground may show additional information related to the camping ground, such as (to show a few examples):
    - the phone number of the organisation responsible for the campground management
    - a list of facilities available at the campground (drinking water, mobile phone access, etc.)
    - links to the campground website (if available)

Introduction

POI display is controlled by the **POI Panel** on the Layers panel.

Open the **Layers panel** by tapping the **Layers button** at top-right of the screen.

The POI controls are located at the bottom of the Layers panel. Scroll down if necessary to show the controls.



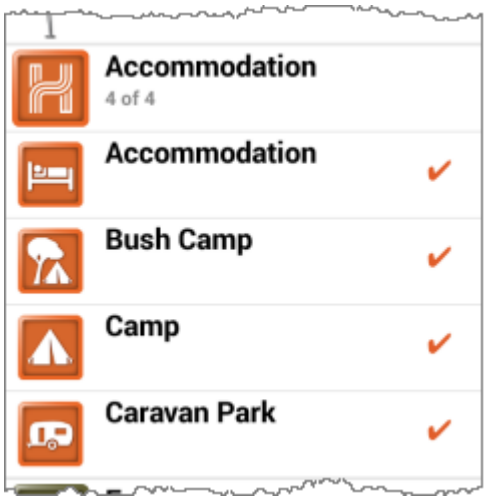
Each section on the panel shows a category. The number shown within the category name indicates how many sub-categories within that category are currently switched on.

By default, all POI categories are active. That is, POIs will be displayed overlaid on the map for ALL categories.

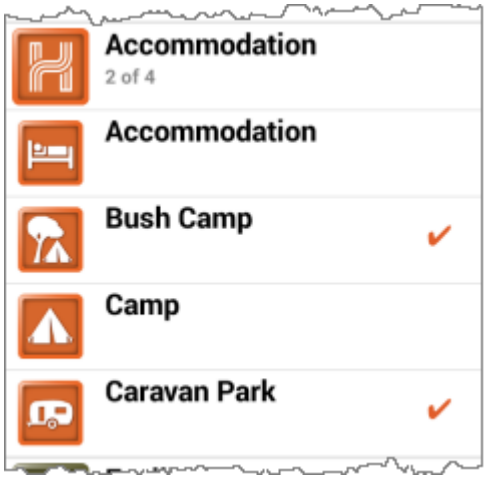
You can turn off specific sub-categories, or ALL POIs within a category from the **Point of Interest panel**.

You can toggle the status of each category as a whole by tapping-and-holding on the category name. In the example shown below, we have switched off all but the Accommodation category, as shown by the indicator **4 of 4** for Accommodation. The other categories all show **0 of ...**

Tapping a category expands that category to show the sub-categories within the category. The Accommodation sub-categories are shown in the example below. Note that sub-categories which are switched ON are those marked with a tick.



You can switch off any sub-category by tapping anywhere on the sub-category line. The example below shows the "Accommodation" and "Camp" sub-categories have been switched off. Notice that the tick mark is no longer shown against the switched-off sub-categories, and the number adjacent to the category name shows **2 of 4**.



POI Categories

The POIs which come as part of the app are divided into categories and sub-categories. The categories and sub-categories are listed below.

- Accommodation
  - Accommodation
  - Bush Camp
  - Camp
  - Caravan Park
- Facility
  - Dump Point
  - Picnic Area
  - Rest Area
  - Toilet
  - Water Points

- Service
  - Emergency Telephone
  - Mechanical Repairs
  - Medical Centre
  - Police Station
  - Post Office
  - Public Telephone
  - Tyre Repairs
- Information
  - Parks and Wildlife
  - Ranger Station
  - Visitor Centre
  - Visitor Centre - Accredited
- Supply
  - Fuel - 24 Hour
  - Fuel
  - General Stores
  - Roadhouse

A legend can be displayed showing all icons for POI categories and sub-categories.

See the Legends topic for details.

POI Nametag

Tapping a POI icon will pop up the **POI Nametag** for the POI which you tapped on.

The POI nametag shows the name of the POI. Only ONE POI OR Waypoint nametag can be displayed on screen at once.

- Tapping the current POI icon again will close the nametag
- Tapping another POI while a different POI nametag is displayed will close the original nametag, and open the new nametag.

Tapping the POI nametag will open the **Point of Interest Details panel**.

Point of Interest Details panel

The Point of Interest details panel displays information related to the selected POI, as well as providing actions which can be performed against the selected POI.

Tapping any of the detail headers shown below will expand the panel to show the relevant detail pane.

- Contact
- Facilities
- Fuel
- Activities

Each of these items is discussed in more detail below.

POI Info pane

The top part of the Point of Interest details panel has a pane which displays the following information

Name

The name of the selected POI

Position Description

The panel displayed next to the POI Preview shows two lines of information as follows:

- The Distance and Bearing of the POI from your current location (as the crow flies)
- The Latitude and Longitude of the POI

Contacts pane

The Contacts pane will expand when tapped to display contact information for the selected POI.

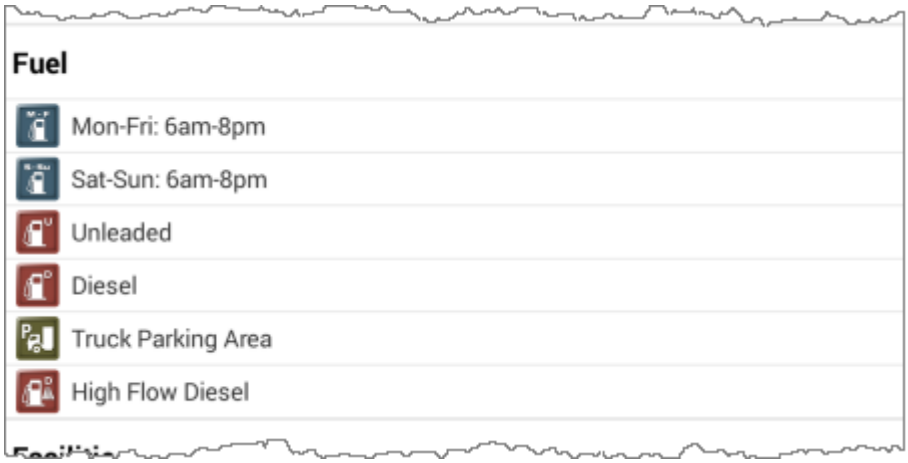
The contact information available will depend on the POI selected, but may include some or all of the following:

- **Address**
- **Phone Number**
- **Send Email** link ***(This feature can only be used via an active connection between your device and the internet)***
- **Open Website** link ***(This feature can only be used via an active connection between your device and the internet)***

Fuel pane

The Fuel pane will expand when tapped to display more detailed fuel information for the selected POI.

The pane provides information related to opening hours (if known), and which types of fuel are available at the selected POI. An example is shown below.



Facilities pane

The Facilities panel shows facilities which are available at the selected POI. An example is shown below.

Activities pane

The **Activities pane** shows activities which may be available at the selected POI. An example is shown below.

POI Actions

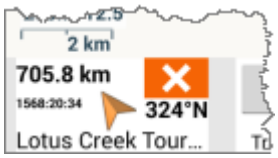
The POI Info pane also contains a number of options which allow you to interact with the POI.

Each of these items is discussed in more detail below.

Guide Me

The Guide Me option will create an as-the-crow-flies track to follow to get to the POI. This works in the same way as directions to a user-created waypoint.

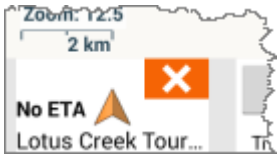
As soon as you begin the Guide Me process, the active destination will appear in the data panel at the lower-left corner of the screen, as shown below.



The panel shows the following information:

- The distance to the selected POI / waypoint
- The bearing to the selected POI / waypoint
- The approximate travel time to the selected POI / waypoint (based on current speed)
- The name of the selected POI / waypoint

If you do NOT have a GPS fix, and you attempt to start a routing operation, the panel will not be able provide any guidance, as shown in the example below.



If you wish to cancel the currently active destination, tap the **Cancel Go To button** within the panel.

Driving Directions

NOTE
This feature can only be used via an active connection between your device and the internet

The **Driving Directions** option uses Google Maps to provide you with a list of directions to follow to get to the selected POI from your current location. When tapped, either a panel will pop up showing driving directions, or the external app itself will open.

Depending on the apps you have installed, you may be prompted to choose which app you would like to use to produce a path between your current location and the selected POI.

Note that the functionality provided by these apps is external to the functionality within the *Hema Explorer* app, and we have no control over the functionality provided by external apps.

Waypoints

A note about Waypoints vs. POIs

While POIs (Points of Interest) and Waypoints are both used to mark a single specific location, there are some significant differences between Waypoints and POIs:

- POIs are normally supplied by the app developer (usually as part of a package of POIs)
- You cannot usually edit any of a POI's properties (such as position or name) as the properties are set by the creator.
- Waypoints are normally created by the user, or sourced from a friend, or the internet, etc.
- The properties of a waypoints can be edited to suit yourself.

You may occasionally hear of "Rich POIs". Rich POI is a term used to describe a POI which has more information associated with it. An example might be:

- A standard POI shows the location of a camping ground only
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    - the phone number of the organisation responsible for the campground management
    - a list of facilities available at the campground (drinking water, mobile phone access, etc.)
    - links to the campground website (if available)

Introduction

Within the *Hema Explorer* app, a waypoint is defined as marking a single specific location.

You can have many waypoints within *Hema Explorer*, and you can switch waypoint visibility on and off globally within the app from the Points of Interest panel.

Waypoints can be synced with your Hema Explorer Cloud account.

Adding Waypoints

To mark a waypoint, first tap the flag icon on the app titlebar. This will popup the **Waypoints menu**.

The menu contains four options:

- Create Waypoint
- Create Waypoint Near Me
- Take Picture

The first three options are discussed further down this page.

- Create Route

The create route option allows you to create a series of waypoints which are linked together in a sequence forming a track to follow.

See the Routes section for details on creating and using routes.

Create Waypoint and Create Waypoint Near Me

Create Waypoint

The **Create Waypoint** option creates a waypoint to mark your location. The location defaults to the centre of the map panel (this might not necessarily be your current position), and the Waypoint details window pops up showing details of your waypoint. While the Waypoint Details window is open you can tap-and-drag the pin around to modify its position. Once you are satisfied that the position is correct, you use the buttons on the Waypoint Details window to save your changes.

Create Waypoint Near Me

The **Create Waypoint Near Me** option creates a waypoint to mark your location. The location defaults to your current position, and the Waypoint details window pops up showing details of your waypoint. While the Waypoint Details window is open you can tap-and-drag the pin around to modify its position. Once you are satisfied that the position is correct, you can use the buttons on the Waypoint Details window to save your changes.

Take Picture

This option allows you to mark the current location using an image, which is captured within the app.

NOTE
Features related to image capture are only available on devices equipped with an internal camera. If your device does not have an internal camera, the function may not work, or may not be visible. The image capture / camera controls displayed on your device may not be the same as those shown here. All devices which have in-built cameras will have some common elements, but their appearance, additional features, and level of sophistication may vary widely depending on the device.

The buttons on the **Image Capture screen** allow you to control the image capture process.

Once you have captured an image, the screen will show a preview of the image which you captured.

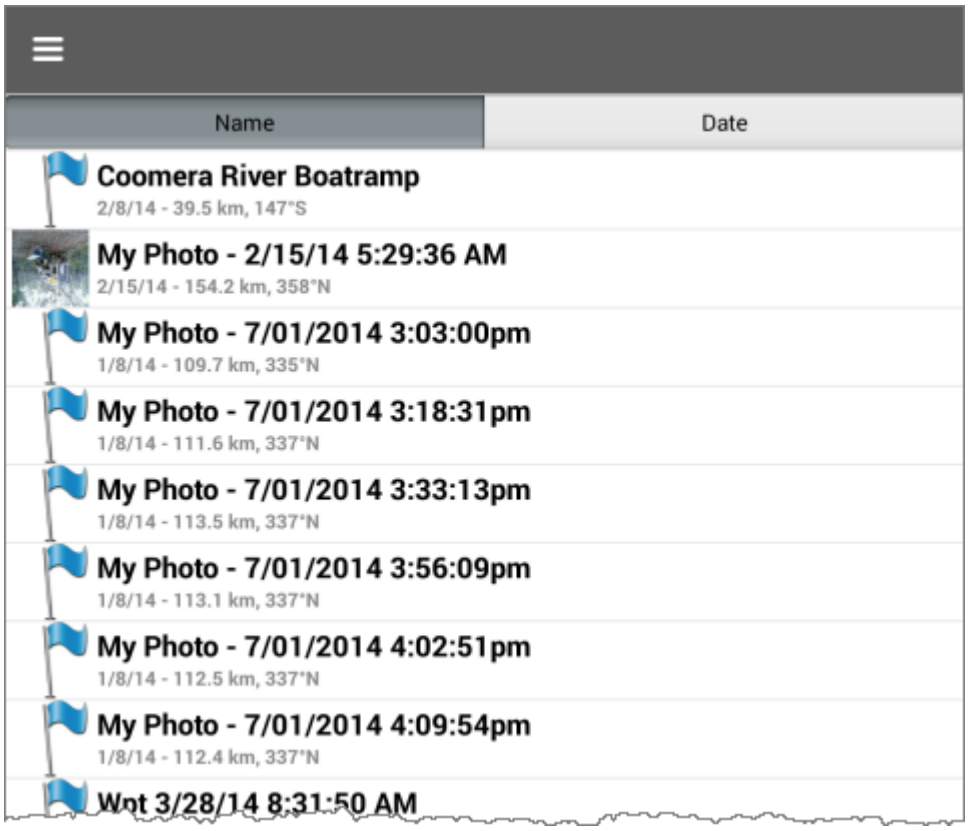
Once the image has been captured, you will see a preview image, with the options below:

Tap the **Accept button** if you are satisfied with the image, and wish to save the captured image.

Tap the **Redo button**, if you do not want the image you captured, and wish to shoot a new image.

Tap the **Cancel button** to exit the image capture process without saving your image.

The captured images will sync to your Hema Explorer Cloud account.

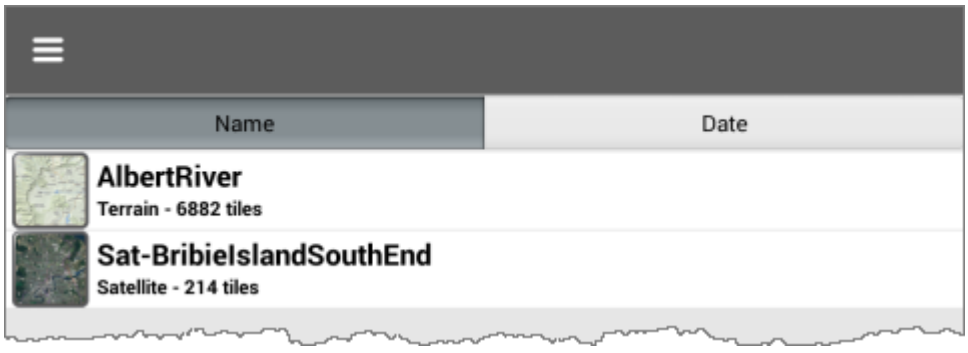


Your image will now be accessible in your Waypoints list on the My Data panel. It behaves just like any other (non-image) waypoint. A thumbnail image will be shown instead of a waypoint icon within the Waypoint List panel

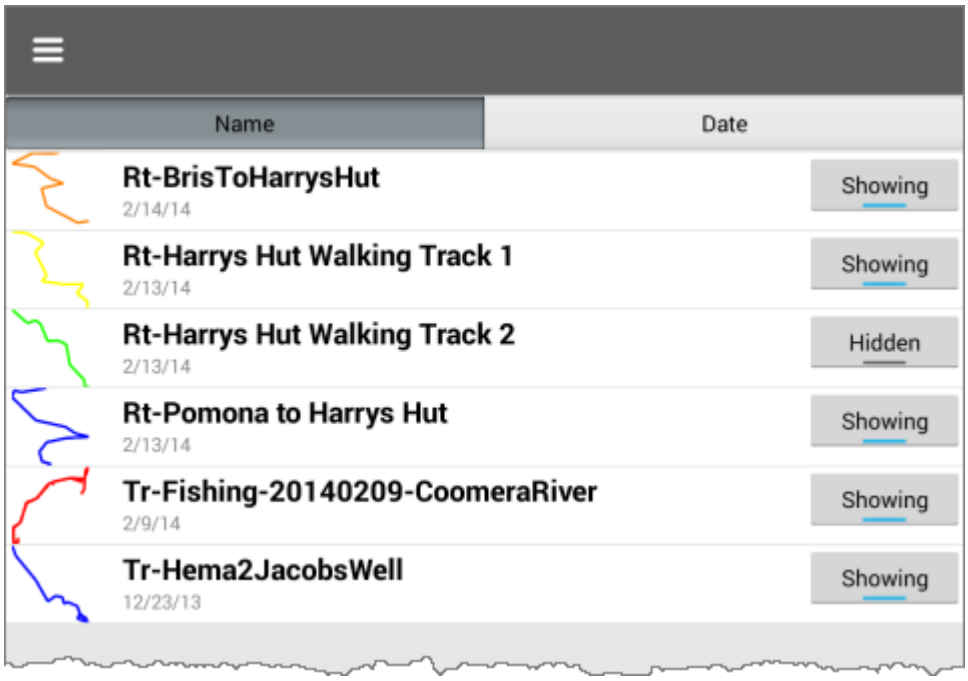
Sorting data

You can sort your data by tapping the desired header button on the list page of the items you wish to sort.

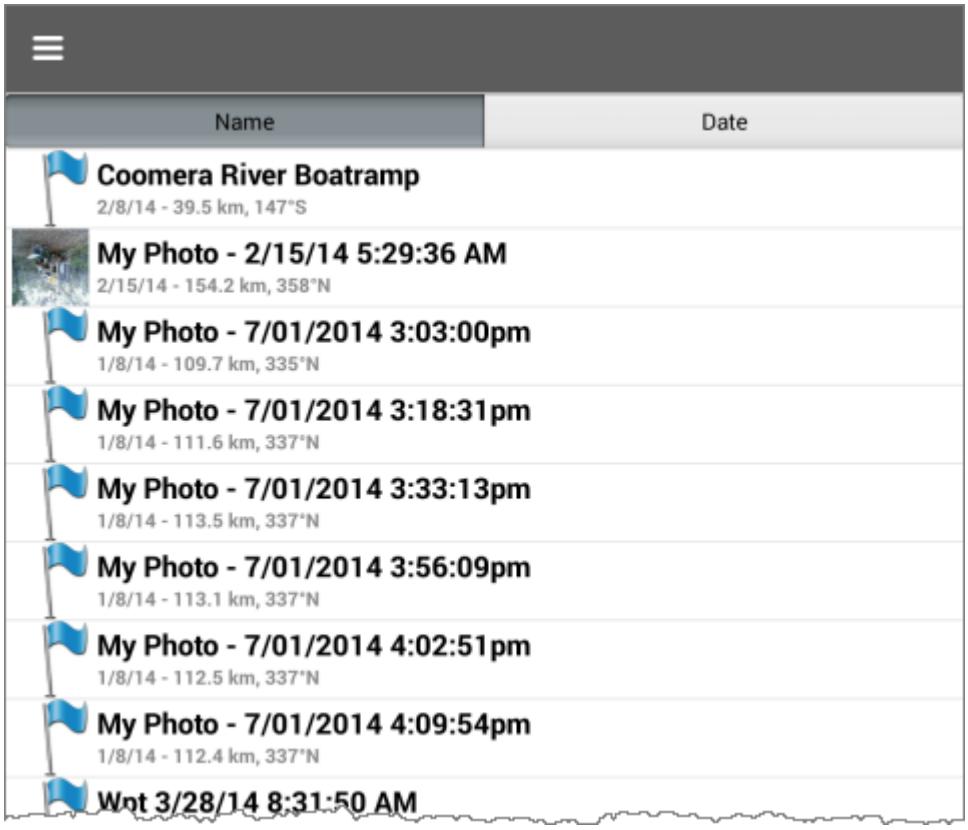
Maps panel



Tracks panel



Waypoints panel



All data displayed on their respective list panels can be sorted in the following order by tapping the appropriate header button:

- Name
- Date

Waypoint Details panel

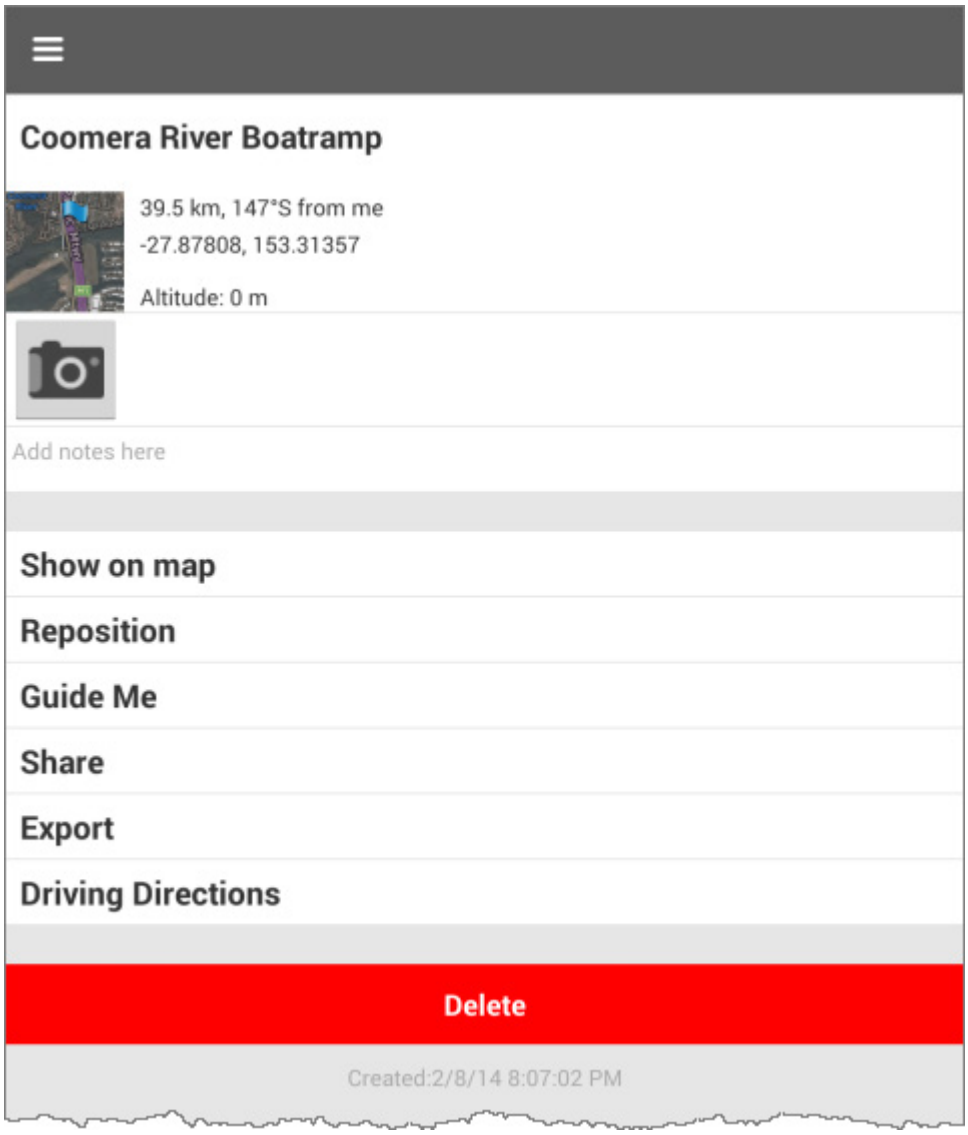
You can view details of an existing waypoint at any time by first tapping the **Waypoint icon** (by default the waypoint icon is a **flag**).

Note
You can also view a Waypoint's details by tapping the waypoint within the Waypoint panel from the pull-out side panel.

The Waypoint nametag shows the name of the Waypoint, and the nametag handle. Only ONE POI OR Waypoint nametag can be displayed on screen at once.

- Tapping the current Waypoint nametag or the Waypoint icon again will close that the nametag
- Tapping another Waypoint or POI while a different Waypoint or POI nametag is displayed will close the original nametag, and open the new nametag.

The Waypoint nametag will open the **Waypoint panel** when tapped.



The Waypoint panel displays information related to the selected Waypoint, as well as providing actions which can be performed against the selected Waypoint. The waypoint creation date and time is also displayed at the bottom of the Waypoint panel.

All of these items are explained in the Waypoints panel section of this user guide.

Routes

Introduction

Within the *Hema Explorer* app, a route is defined as a collection of Route Waypoints in a sequence. Each route waypoint is connected to the adjacent route waypoint(s) by straight line connections ("as-the-crow-flies").

You can have multiple routes within *Hema Explorer*, and you can switch any route between active and inactive states.

Routes can be synced with your Hema Explorer Cloud account.

A note about creating routes with the Hema Explorer Android app

As a general guide, we find the following technique makes for the fastest and simplest route creation experience.

- Zoom out a fair way so that you can see your start and end points if possible.
- Add points at the major course changes along the route. (As you add a new point to the route, the app automatically adds a new ***mini-handle*** halfway along the route segment which was just created.)
- Zoom in to see the detail of your course
- Fine-tune the route by using the mini handles to refine the accuracy of the route.
- You can make the route as detailed or as basic as you like, it's up to you.

The thing is to strike a balance between the time it takes to create the route, and the usefulness of the route as an aid to getting you to your end destination.

Creating Routes

Tap the **Waypoint button** on the app titlebar. The **Waypoint menu** will pop up.

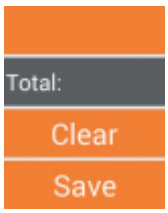
The options available are

- Create Waypoint
- Create Waypoint Near Me
- **Create Route or Measure Distance**
- Take Picture

NOTE
Features related to image capture are only available on devices equipped with an internal camera. If your device does not have an internal camera, the function may not work, or may not be visible. The image capture / camera controls displayed on your device may not be the same as those shown here. All devices which have in-built cameras will have some common elements, but their appearance, additional features, and level of sophistication may vary widely depending on the device.

Tap the **Create Route or Measure Distance button** on the Waypoints menu to start creating a route.

when you tap the Create route button, the **Route control** opens at upper-right of the screen, as shown below



The **Route control** is displayed while you are in either **Route Create** OR **Route Edit** mode. The Route control shows

- The number of points contained within the route
- The total distance of the route
- Buttons allowing you to **Clear** or **Save** the current route

Tap in the **Route Name field** at the top of the panel to give your route a name.

By default, the app gives routes a standard name, when saving, of the form **Route (DD/MM/YYYY HH:MM:SS)**. You can leave the default name or change it to suit.

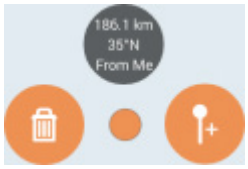
Tips on naming your data

It is recommended to give your data (Routes, AND Tracks & Waypoints) a sensible name for future reference, and to aid in identifying routes on your Cloud account, etc. here's some suggestions:

- **Routes & Tracks**
  - rt-Brisbane-to-Roma ("rt" - identifies it clearly as a route)
  - tr-CapeYorkTrip-2013 ("tr" - identifies it clearly as a track)
  - tr-WA-Odyssey
- **Waypoints**
  - Micks_Secret_Barra_Spot
  - Perfect-Campground
  - Nice_Sunset
  - RareBirdColony

You get the idea! It will be easier to use your data later if you give it a good recognisable name right from the get-go.

Tap-and-hold on the map anywhere to place a point to start your route, and continue adding points until you are happy with your route.



When you tap-and-hold in Route Edit or Create mode, a **Route Point handle** appears to show the point.

There are a number of parts to the Route Point handle as shown below

The **Point marker** marks the actual point. You can tap-and-drag on the point marker to move the point around on the map.

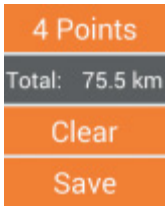
The **Delete Point button** will delete the active point from the route. If the active point is the only (first) point in the route, then the route creation mode is cancelled. If the active point is between two other points, when deleted, the route line will be drawn directly between the two adjacent points.

The **Point Info indicator** shows some information about the current point. If the point if the first in a route, the indicator will show the distance and bearing from your current position, as shown above.

If the active point is the second or subsequent point within a route, an additional Point Info indicator will appear. This extra indicator will show the distance of this point from the previous point, along with the total distance of the route at that point, as shown below.

The **Add Waypoint button** will add the current point in the route as a waypoint.

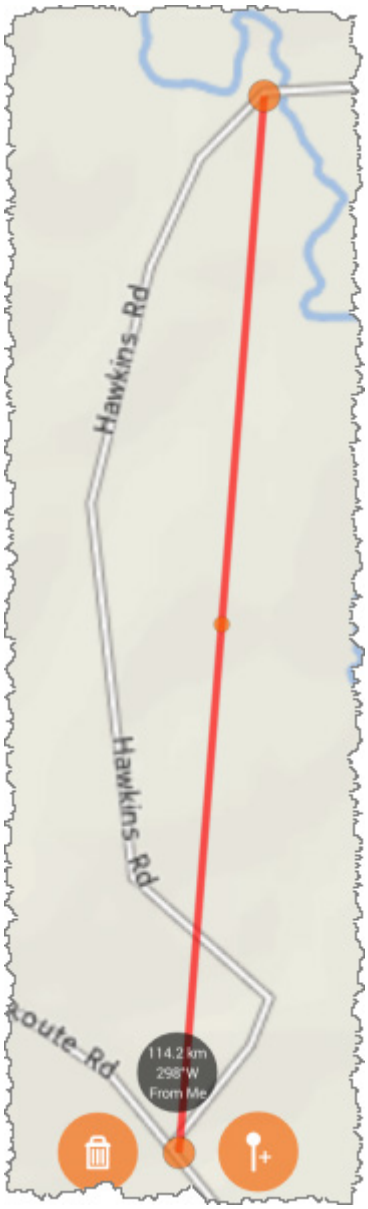
Remember, a route is made up of a sequence of route points, which are not the same as "normal" waypoints. Tapping this button on a point leaves that point as a part of the route, but also adds a new "standalone" waypoint to mark that spot.

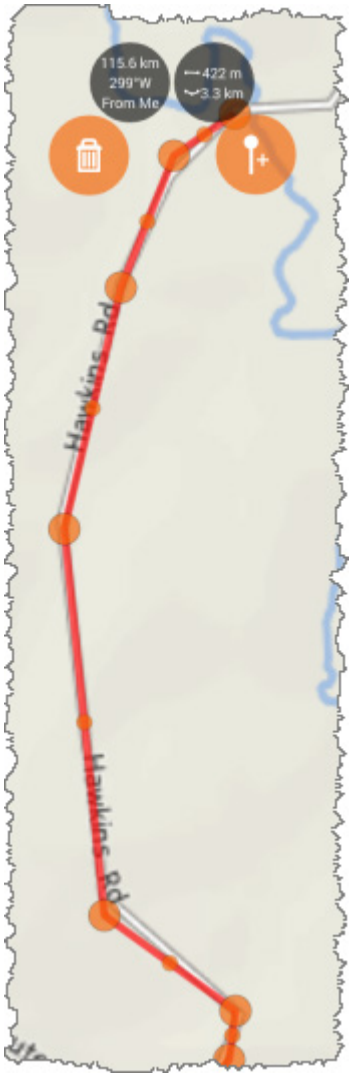


As you add points to the route, the **Route control** shows how many points make up your route, and the total length of the route.

Each time you add a point, the line joining the previous point to the new point has a mini-handle halfway along its length, as shown below.

If you tap the mini-handle, the point becomes a full blown route point, and is movable and editable in the same way as any other route point. Once a mini-handle is converted to a full point, a new mini-handle appears on the lines adjacent to the new point, where it links to the previous and next points. the new mini-handles can be converted to points as well.


Hawkins Rd
Hawkins Rd
Route Rd
114.2 km
298°W
From Me



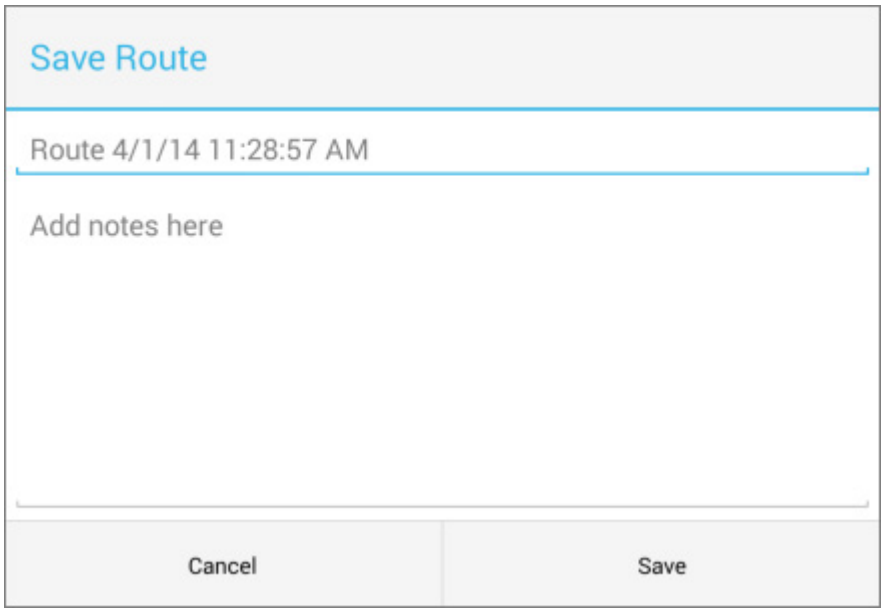
Continue adding points, and refining your route until you are satisfied with the result.

Save

Once you are satisfied with your creation, tap the **Save button** to save your route in the Track list under My Data.

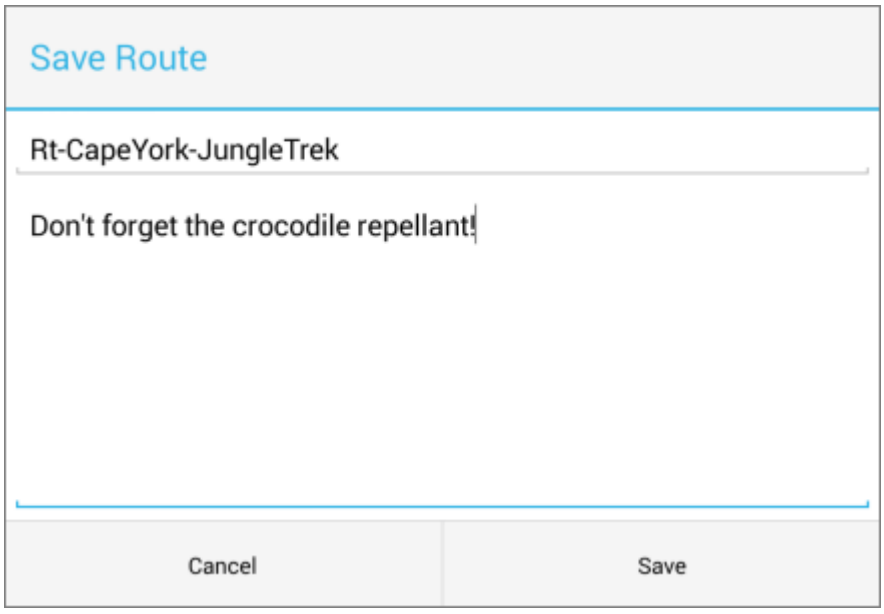
Clear

If you make a mistake or change your mind, simply tap the **Clear button** to *erase the entire route*, and start again.



Once you tap the **Save button**, you will be prompted to enter a name for your route, and you can add notes as well.

As mentioned earlier, it is good practice to give routes a recognisable name, to make finding them later easier. Add notes if you wish. An example is shown below.



Summary

As you can see, creating a route involves a number of steps:

- Opening the create route panel
- Adding points to the route
- Moving points (if they are not in the right place)
- Deleting points (if they are surplus to the route requirements)

- Saving the route, giving the route a name and adding notes if required

---

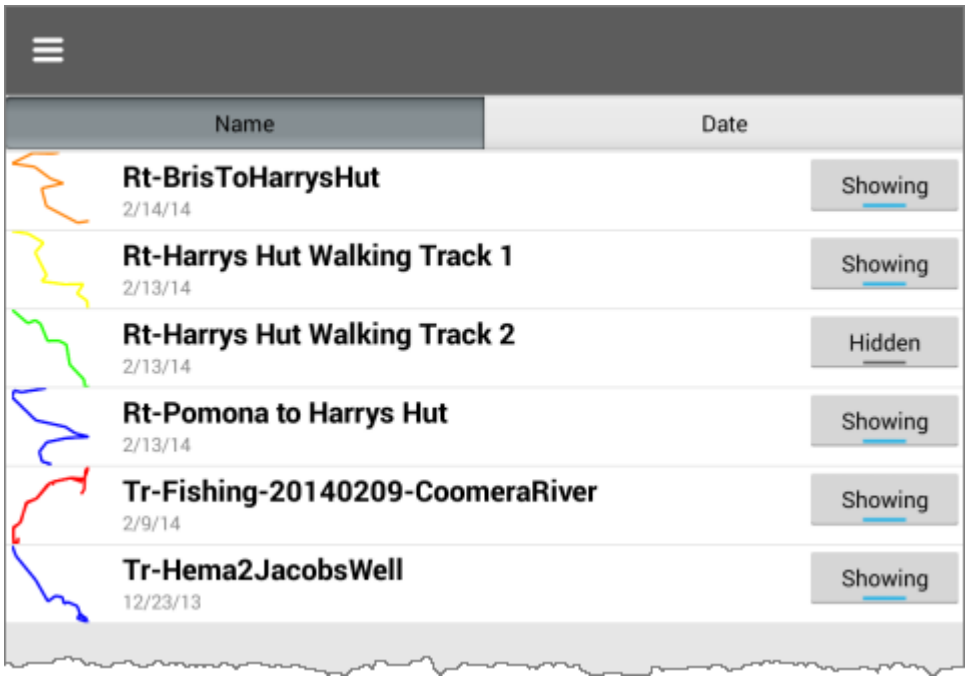
Editing Routes

Any routes you have saved are visible in the Tracks pane of the My Data panel.

Routes visible in the My Data panel could have come from a number of sources, including:

- a route you created earlier and saved on your device
- a route (in GPX format) which a friend emailed to you, and you have opened on your device
- a route which you viewed on the Hema Explorer Cloud at http://cloud.hemaexplorer.com.au, and then copied to your cloud account, which was then subsequently synced to your device.
- a route which was created in Google Maps (or some similar tool), and saved in KML or GPX format, then imported into your Cloud account, and subsequently synced to your device.

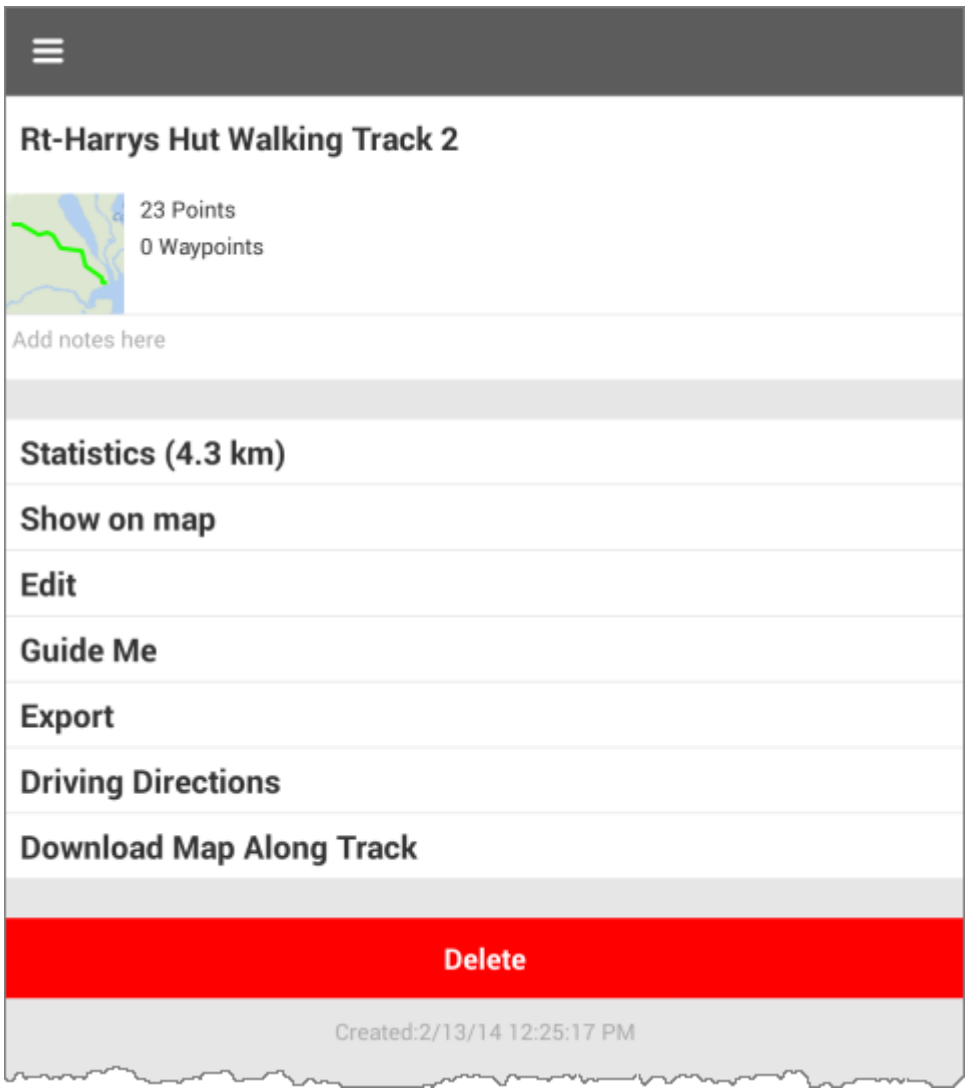
Open the side panel and tap the **Track button** to open the Tracks list.



Each route has a button next to it which allows you to show or hide the track/route on the map.

You can edit a route regardless of its Showing / Hidden status.

Tap the route you would like to edit. You will see the Details panel.



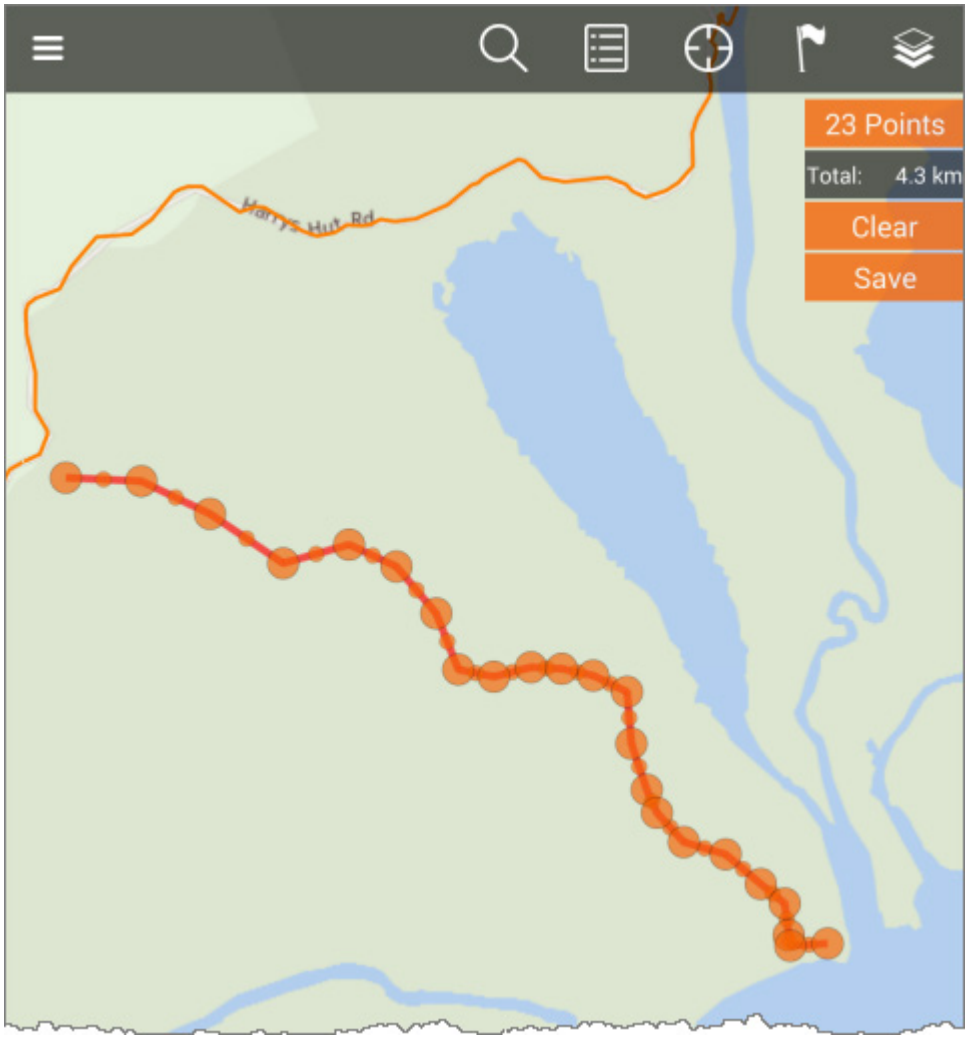
From the route details panel, you can do a number of things:

- **Change the name** by tapping the name at the top of the panel. You can also **edit notes** here.
- See a **larger preview** of the route by tapping the map preview thumbnail.
- **Show** the track on the main map panel
- **Edit** the track points. This allows you to
- **Guide Me** will start navigating to the first point in the route or track. See the section on Following a Route further down this topic.
- **Export** will allow you to save the track or route in multiple formats (GPX, KML or CSV)
- **Driving Directions** will open the track or route in the external app you choose, and attempt to start navigation using the selected app.
- **Download Map Along Track** will download tiles in the currently active HERE Maps layers to cover the path of the track or route. See the section on Downloading maps

along a track in the Downloading Maps section of this user guide for further information.

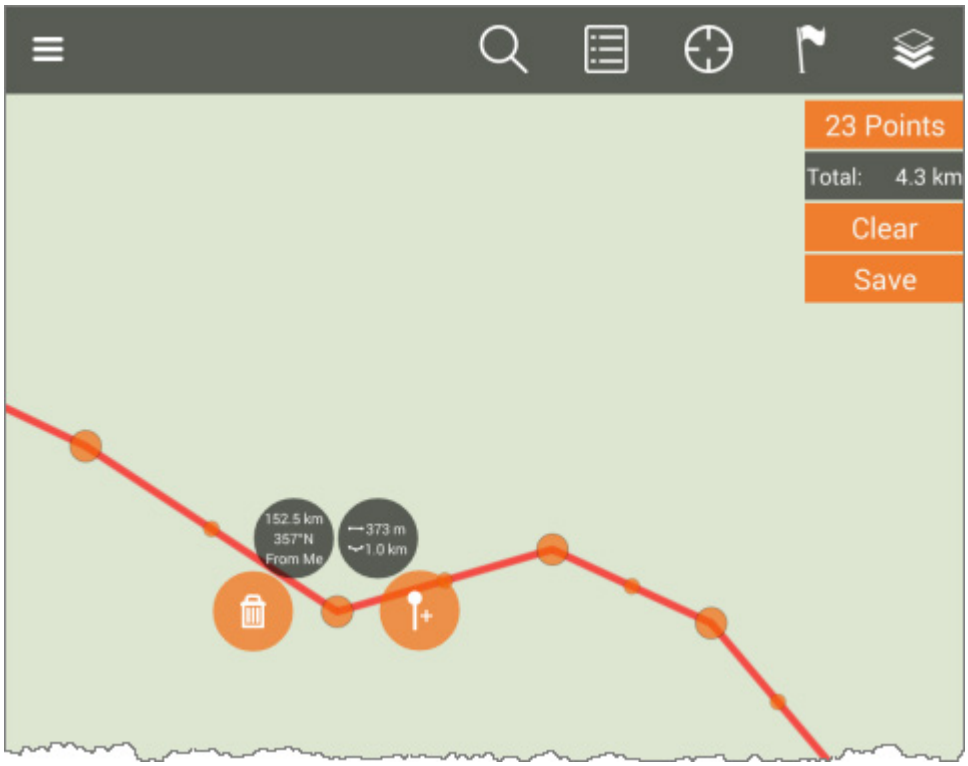
Modifying a Route

When you tap the **Edit button** from the route details panel, the route will open in the map panel.



All points will be visible, and the Route Control box at upper-right will show the route details.

If you wish to edit any points along the route, it is easier to zoom into the section of the route that you wish to alter, as shown below.



After zooming in so you can easily see the point you wish to alter, tap the desired point to make it active.

Once the point is active, the usual controls appear, allowing you to move or delete the point.

All operations on route points are performed in the same way as when you are in route create mode.

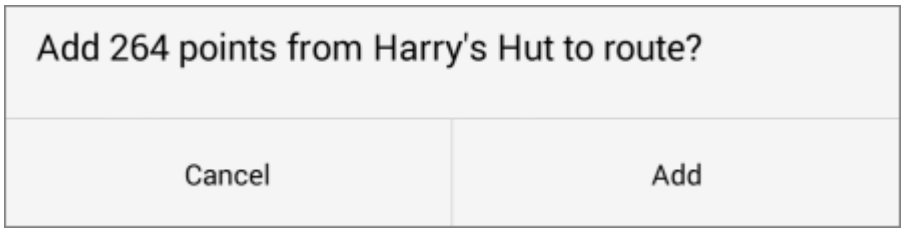
After making changes to the route, save your changes by tapping the Save button.

Joining Routes

If you are creating a route, you have the option to join it to another route. The other route could have been created by you on your device, or imported or synced via the cloud.

Simply create your new route as per usual.

When the END of the new route gets close to the START of the other route, just tap on the other route. You will be asked if you want to add your new route, which is in the process of being created, to the existing route, as shown below.



Tap the **Add button** to join the two route segments together, or tap the **Cancel button** to stop the join, and continue editing the active route.

NOTE The new route which results from the joining of two routes take on the "personality" of the existing route.

ie. If you have route "A", and then start creating route "B", when you join the routes, the new "super route" will be route "A".

Following a Route

You can use the Guide Me function on the track details panel to start navigating to the first point in a track or route.

When you choose to start navigating along a route, *Hema Explorer* will create a line between your current position, and the first point in the route.

Legends

Introduction

Within the *Hema Explorer* app, various symbols are used to mark objects on maps. These may be specific locations (POIs), or things such as roads or demarcation areas on a map.

The app has a number of legends which show the meaning of specific symbols.

Tap the **Legend button** to display the **Legends panel**. The Legends button is located on the app titlebar at the top of the screen.

There are different legends for different aspects of the app. You can click each legend name below to jump to specific information for that legend.

The legends available are

- 1:250K Topo

  Symbols which are used within the 1:250K Topo map

- 1:1M Road

  Symbols which are used within the 1:1M Road map

- Points of Interest

  Symbols used to differentiate categories and sub-categories of POIs included with the app

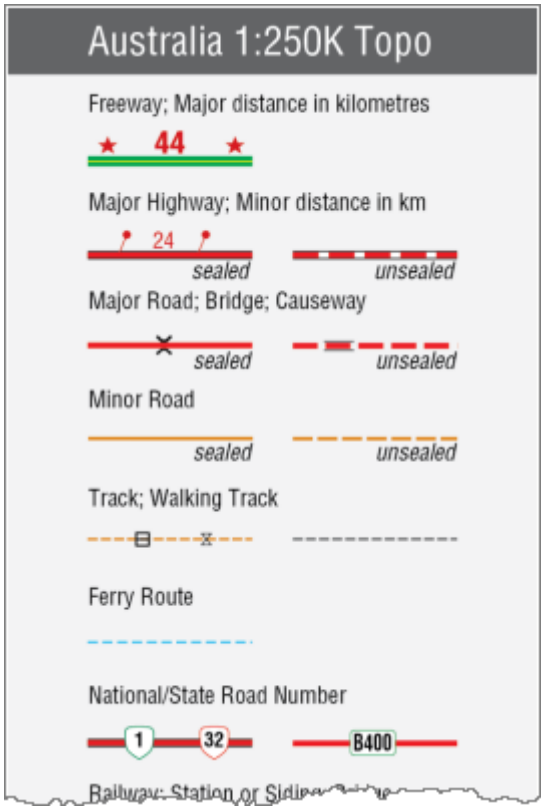
- Gazetteer

  Standard symbols used to differentiate high-level features which form the searchable gazetteer.

1:250k Topo

Tap the **1:250k Topo label** on the Legends panel to display the **1:250k Topo legend**.

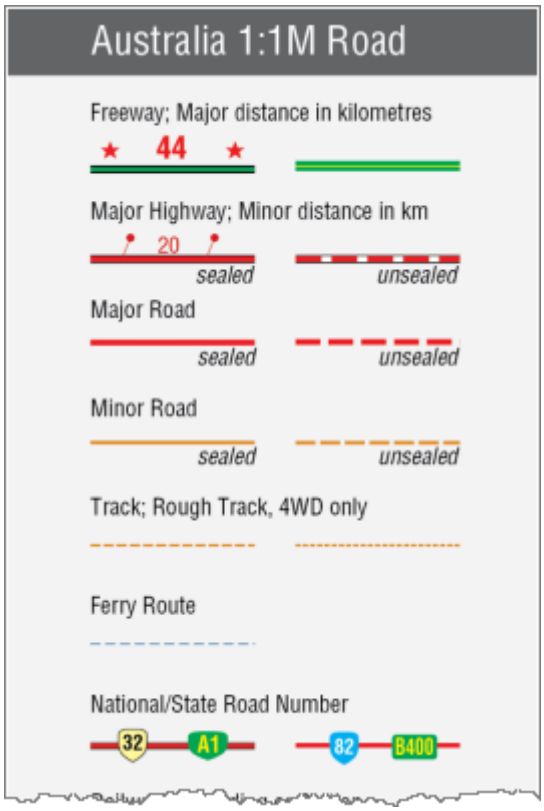
This legend shows features visible on the 1:250K topo layer of the *Hema Maps Layer* layer.



1:1M Road

Tap the **1:1M Road label** on the Legends panel to display the **1:1M Road legend**.

This legend shows features visible on the 1:1M Road layer of the *Hema Maps Layer* layer.

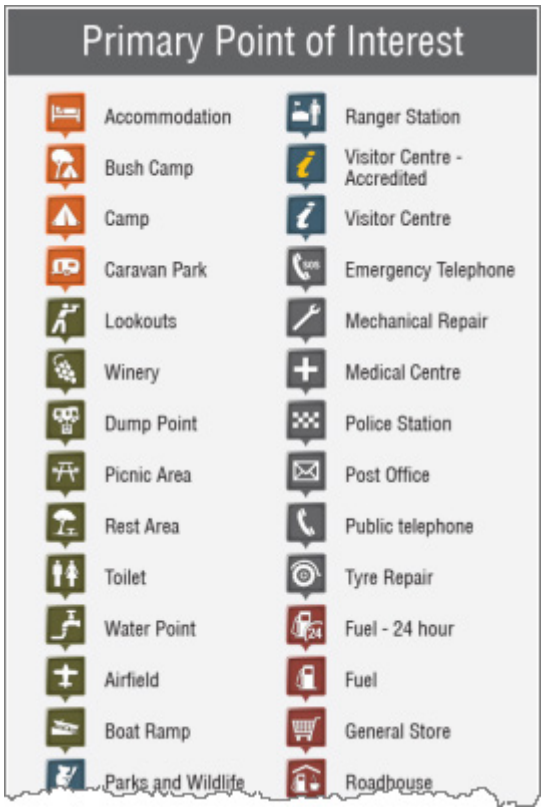


POI Legend

Tap the **Points of Interest label** on the Legends panel to display the **Points of Interest legend**.

This legend shows all the sub-categories of POIs in the top section, and shows POI characteristics below that.

Characteristics may apply to a specific sub-category of POIs, or they may simply apply to a POI itself. ie. the POI characteristic "Activities" could apply to any POI, regardless of its sub-category.



Gazetteer

Tap the **Gazetteer label** on the Legends panel to display the **Gazetteer legend**.

Gazetteer Legend
Airfield
Building
Landform
Park/Reserve
Port
Road
Structure
City/Town

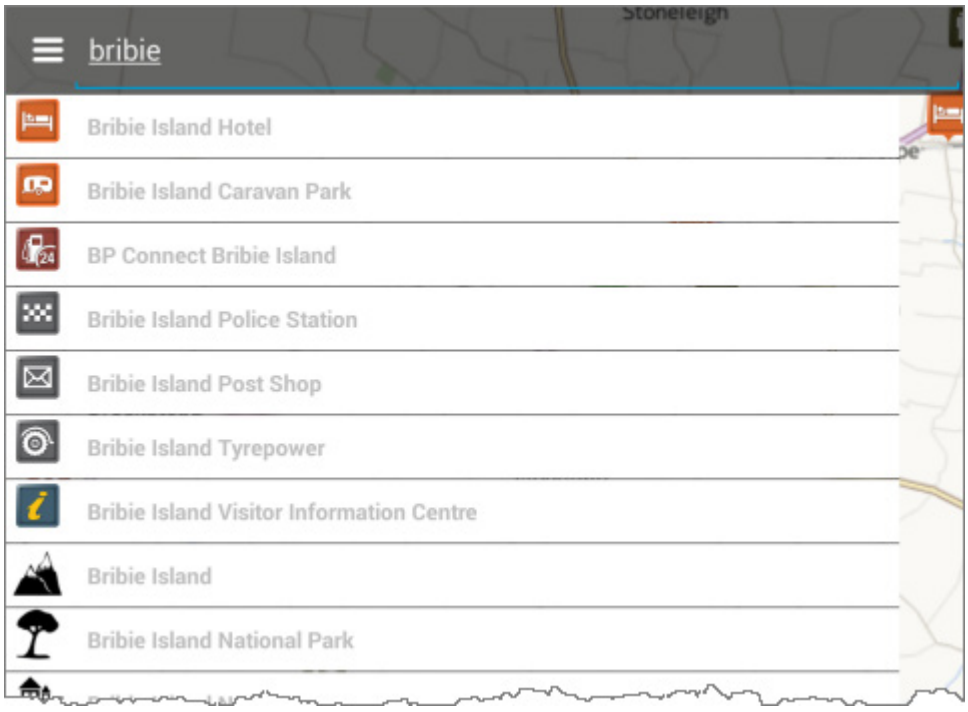
Searching

The **Search button** is located on the top toolbar of the *Hema Explorer* app.

To enter a search string, tap in the search field. A cursor will appear in the search field

When you enter text in the Search box at the top of the app, the app searches for the entered text within the POI and Gazetteer databases.

As you type, the search results are refined. The more characters you type, the more concise the search results which are displayed.



Each search result will display with an associated icon. The icon gives an indication of the source and type of entry.

The Legends built in to the app will give you an indication of the category of the search results items.

You can scroll the results list up and down by tap-and-drag.

Once you find the item you want in the list, tap it.

The map will center on the selected location. You may need to zoom in or out to view the area around the location.

An item which is displayed on the map with its nametag displayed behaves in exactly the same way as any other POI or waypoint, in that you can navigate to it etc.

Glossary

A

Almanac: Information about satellite positions (which satellites are where and when). This information is broadcast by all satellites, and contains information for all satellites. It is usually valid for a period of a few months. The information facilitates quicker acquisition of position.

Altitude: Height above ground

B

Backtrack: Retracing a previously recorded track in the reverse direction to that originally travelled. Useful if you want to retrace your path to a given destination.

Bearing: The direction from your current position to your objective - usually shown in degrees. eg. A bearing of 330 degrees means you should be travelling in a north-westerly direction.

C

Calibration (map): When producing a digital map, an image of the map has specific points defined which correspond to coordinates (latitude / longitude), allowing a position to be plotted on the map.

Cardinal Points: The major points of a compass - North, South, East & West. Intercardinal Points are the points between the cardinal points - North-East, South-West, etc.

Cold Start: When a GPS is first started after it has not been used for some time, it does not have the current ephemeris data, so is unable to use the satellites until the data is loaded.

Constellation (Satellite): The Satellite Constellation refers to the current satellite coverage. ie. the number of satellites in view, which satellites, and where they are in the sky.

Contour Line: A line that joins places of equal elevation on a map. The closer together the contour lines shown, the steeper the terrain that they represent.

Control Segment: A world-wide network of GPS monitoring and telemetry stations operated by, or on behalf of, the US Department of Defense. The tracking data is used by the Master Control Station at Colorado Springs to calculate satellites' positions (or "broadcast ephemerides") and their clock biases.

D

Dead Reckoning: Navigating by noting the distance, direction and speed of travel, without using any external reference points.

Degrees: A circle contains 360 of them! Can be used to specify direction - West is 270 Degrees. Can also be used to specify position - The equator is at 0 Degrees North and South. Brisbane is approx. 27.4679 degrees South.

DGPS: DIFFERENTIAL GLOBAL POSITIONING SYSTEM. Uses a fixed station to broadcast correction information in an effort to reduce various errors to increase accuracy of position.

Digital Map: A map which is electronic, as opposed to a paper map. Usually means a file containing a map image which has been calibrated.

DOP: DILUTION OF PRECISION. Errors arising from satellite geometry. A small number of satellites grouped close together in the sky gives poor accuracy (high DOP), while many satellites more evenly spread provides better accuracy (low DOP).

E

Easting: UTM. Refers to how far East or West you are. In UTM references, it is specified before the Northing. (Horizontally on a map).

EGNOS: EUROPEAN GEOSTATIONARY NAVIGATION OVERLAY SYSTEM. A European WAAS system.

Elevation: Height above a given reference point; usually mean sea level.

EPE: ESTIMATED POSITION ERROR. GPS receivers are never completely accurate. The EPE gives an estimate of how far out the position given may be.

Ephemeris (correction): Data which can be used to correct small deviations in satellite orbits. This data is required by GPS receivers before they can access satellites for navigation purposes. See also Alamanac.

Equator: The imaginary line which divides the northern and southern hemispheres of the Earth. 0 degrees Latitude.

ETA: ESTIMATED TIME OF ARRIVAL. GPS works out what time you are likely to reach your destination based on how far you have left before reaching it, and your average progress towards it (VMG). More accurate if the conditions ahead are similar to those already travelled. See also ETE.

ETE: ESTIMATED TIME EN ROUTE. Specifies how much time before reaching your destination. See also ETA.

G

Gazetteer: The Gazetteer of Australia provides map-makers and the public with authoritative information on the location and spelling of approved place names. Data is provided by Geoscience Australia (http://www.ga.gov.au/)

GDA94: GEODETIC DATUM of AUSTRALIA, 1994. Replaced the AGD. GDA is similar to WGS84 for most navigation purposes.

GDOP: GEOMETRIC DILUTION OF PRECISION. See DOP.

GeoStationary Satellite: A satellite which stays in the same position relative to the Earth.

GLONASS: GLOBAL ORBITING NAVIGATION SATELLITE SYSTEM. The Russian navigation satellite system. Consists of 24 satellites, and is optimised for use in the northern hemisphere.

GMT: GREENWICH MEAN TIME. A worldwide time standard. Close to UTC

GoTo: Basic navigation to a waypoint. The receiver generally shows the direction to, distance and probably ETA to the specified waypoint.

GPS: GLOBAL POSITIONING SYSTEM. A system which provides precise location based on data transmitted from a constellation of 24 satellites. It consists of three segments: (1) Control Segment, (2) Space Segment, and (3) User Segment.

GPS Receiver: An electronic circuit which receives signals from GPS satellites and calculates information such as the receiver's location.

GPS Software: Software which runs on a PC, phone, tablet or other computing device which allows management of things such as waypoints, routes, tracks, digital maps, etc.

GPX: GPX (for GPs eXchange) format is a type of file which can be used as a common format for stoprage of GPS data (syuch as Waypoints, Tracklogs, and Routes). See http://en.wikipedia.org/wiki/GPS_eXchange_Format

Grid Zone (UTM): An area of the UTM Grid, eg. 55H 10J

H

HDOP: HORIZONTAL DOP

Heading: The direction in which you are travelling. Usually specified in Degrees.

L

L1 & L2: The GPS system uses two frequencies for satellite signal broadcasts. L1 is for civilian use. L2 is more accurate, and for military use.

Lat/Long: Latitude and Longitude. a grid system which represents your position on the surface of the Earth by angles from the Earth's center.

Latitude: Defines how far North or South of the Equator you are. See also Parallels.

Longitude: Defines how far East or West you are relative to the imaginary line (the Prime Meridian) which runs through Greenwich, England.

M

Mercator: A way of projecting a spherical Earth onto a flat surface (such as a map).

Meridian: A line of Longitude. Half circles which join North Pole to South Pole.

MGA: MAP GRID of AUSTRALIA. For most GPS navigation purposes, equivalent to UTM.

MGRS: MILITARY GRID REFERENCE SYSTEM. An extended version of the UTM system used by military forces.

Mil: A way of measuring angles (like Degrees). There are 6400 mils in a circle, whereas there are 360 Degrees in a circle.

Minutes: 60 minutes subdivide a Degree. The actual distance covered by a minute depends upon where you are in the world (not related to the time unit).

Moving Map: A Digital Map which has been calibrated, shwoing your position in real time as you change location.

MSL: MEAN SEA LEVEL. The average level of the sea. Not the same world wide.

Multipath: Interference caused by reflected GPS signals arriving at the receiver, typically as a result of nearby structures or other reflective surfaces. Errors caused by mutipath interference reduce the accuracy of the receiver.

N

North (Grid): North according to your map's UTM gridlines.

North (Magnetic): North according to a compass.

North (True): North according to where the North Pole is.

Northing: UTM. Refers to how far North or South you are. In UTM references, it is specified after the Easting. (Vertically on a map).

O

Odometer: Records distance as you move. Most cars have one. Similar to a Trip Computer.

Outage: A loss of satellite availability, due to (a) there not being enough satellites visible to calculate a position, or (b) the value of the DOP indicator is greater than some predefined value (which implies that the accuracy of the position is unreliable).

P

Parallels: Lines of Latitude.

PDOP: POSITIONAL DOP. (same as GDOP)

Position: The 3D coordinates of a point, usually given as Latitude, Longitude, and Altitude.

R

Re-Radiating Antenna: A type of GPS antenna which receives the signal, transmits it along a wire connection, then re-transmits the signal via another antenna attached to the end of the wire.

Regional Denial: The term refers to where a GPS signal's coverage can be reduced or eliminated over a specific geographic area.

Road Lock: This term refers to GPS software which "snaps" the vehicle position to the nearest road even if the computed position shows the vehicle as not being on that road.

Route: A collection of waypoints linked together which are followed in sequence.

S

Scale: The ratio of a unit on a map to reality. eg. 1:25000 (1:25k), means one centimetre on the map equates to 25000 centimetres (250 metres) in reality. Small-scale maps are 1:1M, 1:250k, 1:100k etc. Large-scale are 1:25k etc.

Seconds: Subdivision of a minute (Lat/long) into smaller units. There are 60 seconds in a minute.

Space Segment: The part of the GPS system in space, including the orbiting satellites and their signal transmissions.

T

Turn-by-Turn: Turn-by-Turn navigation generally refers to a navigation system where the software is capable of creating a route for you showing every step of the path between two points. The software usually provides voice guidance, prompts and warnings along the generated route. This type of software has been popularised by hardware devices, such as Garmin, Tom Tom and Navman in-car GPS Navigation devices.

U

User Segment: The part of the GPS system which includes the user equipment, applications and operational procedures.

UTC: UNIVERSAL TIME, COORDINATED. The world standard for time, adjusted for different timezones. For all practical purposes, it is the same as GMT.

UTM: UNIVERSAL TRANSVERSE MERCATOR. An international standard for describing map coordinates. It is a grid coordinate system that projects global sections onto a flat surface to measure position in specific zones. These zones are 6 Degrees wide and are stepped along the equator such that each zone corresponds to a north-south strip of the earth.

V

Velocity: Speed and direction.

VMG: VELOCITY MADE GOOD. Shows how quickly you are travelling toward your objective. This usually less than your current speed, unless you are heading directly towards your objective.

W

WAAS: WIDE AREA AUGMENTATION SYSTEM. A system which is similar to DGPS, although more advanced. It is also a system used to help reduce the number of GPS errors, and thus the accuracy.

Warm Start: When a GPS receiver starts up after having been used a relatively short time ago (within a few hours), it still has valid ephemeris data, and thus know exactly where the satellites are. A warm start generally means the GPS will find it's location quicker.

Waypoint: A coordinate that represents a position that a vessel, aircraft, vehicle or person has to navigate to, with the aid of GPS.

WGS: WORLD GEODETIC SYSTEM

WMS: WAAS MASTER STATION. Works out signal error, and broadcasts it back to satellites.

X

XTE: CROSS TRACK ERROR. Specifies how far you are off course by distance when heading towards an objective.